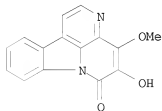


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L4 ANSWER 1 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2009:255073 CAPLUS
 DOCUMENT NUMBER: 150:229413
 TITLE: Protective effect of 4-methoxy-5-hydroxycanthin-6-one, a natural alkaloid, on dextran sulfate sodium-induced rat colitis
 AUTHOR(S): Liu, Jun-Feng; Shao, Meng; Zhai, Da-Wei; Liu, Ke; Wu, Li-Jun
 CORPORATE SOURCE: School of Traditional Chinese Medicine, Shenyang Pharmaceutical University, Liaoning, Peop. Rep. China
 SOURCE: Planta Medica (2009), 75(2), 142-145
 CODEN: PLMEAA; ISSN: 0032-0943
 PUBLISHER: Georg Thieme Verlag
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB In the present study, we evaluated the effect of 4-methoxy-5-hydroxycanthin-6-one (CAN), a natural alkaloid isolated from *Picrasma quassioides* (D.Don) Benn., on ulcerative colitis induced by dextran sulfate sodium (DSS) in rats in comparison with the pos. control drug, sulfasalazine (SASP). Given orally for several days, CAN significantly reduced the severity of colitis and mitigated changes in colon length, colon mucosa myeloperoxidase (MPO) activity, and the level of tumor necrosis factor- α (TNF- α) in serum. The effect of CAN was similar to that of SASP. These results suggest that CAN treatment might be an effective therapeutic intervention against ulcerative colitis induced by DSS.
 IT 18110-86-6, 4-Methoxy-5-hydroxycanthin-6-one
 RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
 (protective effect of 4-methoxy-5-hydroxycanthin-6-one, a natural alkaloid, on dextran sulfate sodium-induced rat colitis)
 RN 18110-86-6 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)

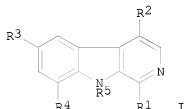


L4 ANSWER 2 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2009:216753 CAPLUS
 TITLE: Preparation method and application of β -kabarin alkaloids from *Picrasma quassioides*
 INVENTOR(S): Yao, Xinseng; Gao, Hao; Zhao, Feng; Jiao, Weihua; Li, Chenyang; He, Fei; Dai, Yi; Zhou, Guangxiong; Ye, Wencai
 PATENT ASSIGNEE(S): Jinan University, Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 17pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent

LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101367802	A	20090218	CN 2008-10198870	20080927

PRIORITY APPLN. INFO.:
 CN 2008-10198870 20080927
 GI



AB The title β -kabarin alkaloids have a formula I represented in the invention, and can be used as anti-inflammatory agents for preventing or treating inflammations caused by release of nitrogen monoxide, tumor necrosis factor- α , and interleukin-6 inflammation media.

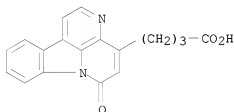
IT 1131570-93-8 1131570-94-9

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation method and application of β -kabarin alkaloids from *Picrosma quassioides*)

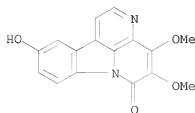
RN 1131570-93-8 CAPLUS

CN INDEX NAME NOT YET ASSIGNED



RN 1131570-94-9 CAPLUS

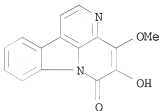
CN INDEX NAME NOT YET ASSIGNED



L4 ANSWER 3 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2009:185786 CAPLUS
 DOCUMENT NUMBER: 150:291092
 TITLE: Quality control method for antiinflammatory traditional chinese medicine preparation
 INVENTOR(S): Yao, Xinsheng; Gao, Hao; Zhao, Feng; Li, Chenyang; Wang, Guocai; Jiao, Weihua; Zhang, Long; He, Fei; Dai, Yi; Yao, Zhihong; Zhou, Guangxiang; Ye, Wencai
 PATENT ASSIGNEE(S): Jinan University, Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 25pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101361793	A	20090211	CN 2008-10198869	20080927
PRIORITY APPLN. INFO.:			CN 2008-10198869	20080927
AB	The title antiinflammatory traditional Chinese medicine preparation comprises: Andrographis paniculata, linearstripe rabdosia herb and Picrasma quassioides. The title quality control method comprises: standard fingerprint chromatogram construction, sample fingerprint chromatogram construction, and their comparison, and can confirm the antiinflammatory active ingredients of andrographolide, rosmarinic acid and nigakinone. The quality control method has the advantages of high repeatability, high stability, and easy operation.			
IT	18110-86-6, Nigakinone RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (quality control method for antiinflammatory traditional chinese medicine preparation)			
RN	18110-86-6 CAPLUS			
CN	6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)			



L4 ANSWER 4 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:985522 CAPLUS
 TITLE: Alkaloids from twigs and leaves of Picrasma quassioides
 AUTHOR(S): Chen, Meng; Fan, Huaying; Dai, Shengjun; Liu, Ke
 CORPORATE SOURCE: School of Pharmacy, Yantai University, Yantai, Shandong Province, 264005, Peop. Rep. China
 SOURCE: Zhongcaoyao (2007), 38(6), 807-810
 CODEN: CTYAD8; ISSN: 0253-2670
 PUBLISHER: Zhongcaoyao Zazhi Bianjibu
 DOCUMENT TYPE: Journal

LANGUAGE:

Chinese

AB Compds. were isolated and purified by column chromatog. over Sephadex LH-20 and silica gel column. Their chemical structures were elucidated on the basis of physicochem. properties and spectral data. Sixteen alkaloids were isolated, purified and identified as: 5-methoxycanthin-6-one (I), 11-hydroxycanthin-6-one (II), canthin-6-one (III), 4,5-dimethoxycanthin-6-one (IV), 4-methoxy-5-hydroxycanthin-6-one (V), 3-methylcanthin-2,6-dione (VI), 1-formyl-4-methoxy- β -carboline (VII), 1-methoxy- β -carboline (VIII), 1-ethyl-4,8-dimethoxy- β -carboline (IX), 1-methoxycarbonyl-4-hydroxyl- β -carboline (X), 1-methyl-4-methoxy- β -carboline (XI), 1-ethoxycarbonyl- β -carboline (XII), 1-formyl- β -carboline (XIII), 1-methoxycarbonyl- β -carboline (XIV), 1-ethyl-4-methoxy- β -carboline (XV) and 1,2,3,4-tetrahydro-1,3,4-trioxo- β -carboline (XVI). Compound XI is separated from the natural plant for the first time, and compds. II, VIII and XV are separated from plants of *Picrasma* Bl. for the first time.

IT INDEXING IN PROGRESS

IT 15071-56-4, 5-Methoxycanthin-6-one 18110-86-6,

4-Methoxy-5-hydroxycanthin-6-one 18110-87-7,

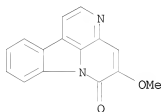
4,5-Dimethoxycanthin-6-one

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(alkaloids from twigs and leaves of *Picrasma quassioides*)

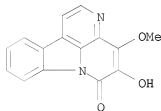
RN 15071-56-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



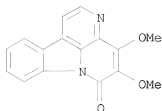
RN 18110-86-6 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)

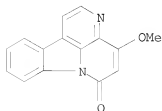


RN 18110-87-7 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)

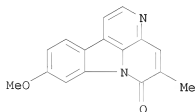


L4 ANSWER 5 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2008:947224 CAPLUS
 DOCUMENT NUMBER: 150:162542
 TITLE: Utilization of chitin and chitosan as chromatography supports for separation of alkaloids from dichloromethane extract of *Simaba ferruginea*
 AUTHOR(S): Cunha, Georgia P.; Cechinel-Filho, Valdir; Martins, Domingos T. O.; Marcello, Cesar M.; Lima, Joaquim C. S.; Silva, Regilane M.; Noldin, Vania F.; Rodrigues, Clovis A.
 CORPORATE SOURCE: Programa de Mestrado em Ciencias Farmaceuticas e Nucleo de Investigações Químico-Farmaceuticas (NIQFAR), Universidade do Vale do Itajaí (UNIVALI), Itajaí, 88302-202, Brazil
 SOURCE: Latin American Journal of Pharmacy (2008), 27(2), 255-257
 CODEN: LAJPA9; ISSN: 0326-2383
 PUBLISHER: Colegio de Farmaceuticos de la Provincia de Buenos Aires
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB This work presents a comparative study of the efficacy of different chromatog. supports in the isolation of the canthin-6-one and 4-methoxycanthin-6-one, two bioactive alkaloids isolated from dichloromethane extract of *Simaba ferruginea*. When chitin was used as chromatog. support, the yield of the compds. were higher than silica gel, a traditional chromatog. support.
 IT 5023-08-5, 4-Methoxycanthin-6-one
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (utilization of chitin and chitosan as chromatog. supports for separation of alkaloids from dichloromethane extract of *Simaba ferruginea*)
 RN 5023-08-5 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-methoxy- (CA INDEX NAME)

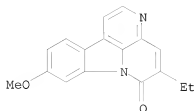


REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2008:242705 CAPLUS
 DOCUMENT NUMBER: 148:513277
 TITLE: Triterpenoids and alkaloids from the roots of *Peganum nigellastrum*
 AUTHOR(S): Ma, Zhongze; Hano, Yoshio; Qiu, Feng; Shao, Gang; Chen, Yingjie; Nomura, Taro
 CORPORATE SOURCE: Bio-Organic and Natural Products Laboratory, McLean Hospital, Harvard Medical School, Belmont, MA, 02478, USA
 SOURCE: Natural Product Communications (2008), 3(2), 149-154
 CODEN: NPCACO; ISSN: 1934-578X
 PUBLISHER: Natural Product Inc.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Four lupane-type triterpenoids (1-4) and 7 alkaloids (5-11) were isolated from the roots of *P. nigellastrum*. On the basis of spectroscopic and chemical evidence, the structures of the compds. were elucidated as 3 α -hydroxy-27-trans-caffeoyloxy-20(29)-en-28-oic acid Me ester (1), 3 β -hydroxy-27-trans-caffeoyloxy-20(29)-en-28-oic acid Me ester (2), 3 α -acetoxy-27-trans-caffeoyloxy-20(29)-en-28-oic acid Me ester (3), 3 β -acetoxy-27-trans-caffeoyloxy-20(29)-en-28-oic acid Me ester (4), luotonin C (5), luotonin D (6), harmine (7), harmol (8), harmaline (9), deoxyvasicinone (10) and vasicinone (11). Compds. 1, 3 and 4 are novel triterpenoids, and these pentacyclic triterpenoids were evaluated for their cytotoxicity against the androgen-sensitive LNCaP and androgen-independent PC-3 human prostate cancer cells.
 IT 261948-33-8P, Luotonin C 261948-34-9P, Luotonin D
 RL: ANT (Analyte); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
 (triterpenoids and alkaloids from the roots of *Peganum nigellastrum*)
 RN 261948-33-8 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 9-methoxy-5-methyl- (CA INDEX NAME)



RN 261948-34-9 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-ethyl-9-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:52971 CAPLUS

DOCUMENT NUMBER: 148:198556

TITLE: Composition comprising *Picrasma quassioides* extract with antitumor effect, its preparation method and uses thereof

INVENTOR(S): Zhou, Yawei

PATENT ASSIGNEE(S): Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 14pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

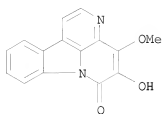
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101099756	A	20080109	CN 2006-10090692	20060707
PRIORITY APPLN. INFO.:			CN 2006-10090692	20060707

AB The title extract contains total alkaloids above 50% and has antitumor effect, wherein alkaloids are nigakinone, β -carboline alkaloids, canthin-6-one, etc. The extract is obtained by pulverizing *Picrasma quassioides*, reflux extracting or percolating with water, C1-C5 lower alc., or diluted hydrochloric acid to obtain extractive solution, mixing with styrene type skeleton resin, evaporating to remove solvent, loading on resin column by dry-method, removing impurities with water or C1-C5 lower alc., eluting with C1-C5 lower alc. water solution, vacuum concentrating, drying, and pulverizing to give an extract. The extract may be prepared into antitumor preps. for oral administration or injection, such as tablet, pill, capsule, soft capsule, granule, oral liquid and lyophilized powder for injection, in combination with adjuvants selected from starch, sucrose, lactose, sugar powder, mannitol, xylitol, polyethylene glycol, iso-Pr alc., tween-80, glycerin, propylene glycol, sodium CM-cellulose, dextrin, sodium chloride, vitamin C, cysteine, citric acid, sodium thiosulfate, sodium sulfite, and gelatin.

IT 18110-86-6, Nigakinone
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (composition comprising *Picrasma quassioides* extract with antitumor effect, its preparation method and uses thereof)

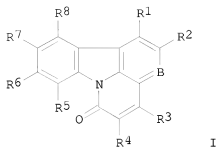
RN 18110-86-6 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



L4 ANSWER 8 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2007:1116269 CAPLUS
 DOCUMENT NUMBER: 147:398627
 TITLE: Use of canthin-6-one and its analogs for the treatment of pathologies linked to mycobacteria
 Fournet, Alain Robert Francois Maxime; Lagoutte, Delphine; Poupon, Erwan; Soriano-Agaton, Flor
 INSTITUT DE RECHERCHE POUR LE DEVELOPEMENT, FR.
 SOURCE: PCT Int. Appl., 44pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007110500	A1	20071004	WO 2007-FR486	20070322
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
FR 2899229	A1	20071005	FR 2006-2677	20060328
FR 2899229	B1	20080530		
EP 1998770	A1	20081210	EP 2007-731175	20070322
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR			
IN 2008DN08917	A	20090327	IN 2008-DN8917	20081023
PRIORITY APPLN. INFO.:			FR 2006-2677	A 20060328
			WO 2007-FR486	W 20070322
OTHER SOURCE(S):	MARPAT 147:398627			
GI				



AB The invention discloses the use, of at least one of I (B = N, N-oxide, etc.; R1-R8 = H, alkyl, cycloalkyl, etc.) for the preparation of a medicament for the treatment or prevention of pathologies linked to, or caused by, mycobacteria. Compound preparation is included.

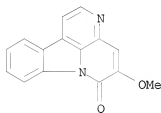
IT 15071-56-4, 5-Methoxycanthin-6-one 871131-76-9,
4-Aminocanthin-6-one 871131-77-0

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)

(canthinone and analogs for treatment of mycobacteria-associated diseases)

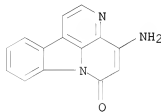
RN 15071-56-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



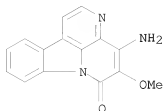
RN 871131-76-9 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-amino- (CA INDEX NAME)



RN 871131-77-0 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-amino-5-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2007:1088617 CAPLUS
 DOCUMENT NUMBER: 147:433502
 TITLE: Antiinflammatory and antibacterial composition comprising andrographolides and Picrasma alkaloids
 INVENTOR(S): Wu, Wei; Shao, Meng; Zhai, Dawei; Liu, Junfeng; Teng, Houlei
 PATENT ASSIGNEE(S): Hainan Shengke Natural Drugs Research Institute Co., Ltd., Peop. Rep. China
 SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 30pp. CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

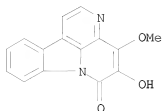
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 101036647	A	20070919	CN 2007-10135645	20070307
PRIORITY APPLN. INFO.:			CN 2006-10034349	A 20060313
			CN 2006-10034368	A 20060313

AB The title composition contains andrographolide (or 14-deoxy-11,12-didehydro-andrographolide) and Picrasma total alkaloids (or 4,5-dimethoxycanthin-6-one or 4-methoxy-5-hydroxycanthin-6-one) at a weight ratio of (1-40):1. The composition has high effective ingredient content, definite efficacy, and better antiinflammatory and antibacterial effects than using above andrographolide compound or canthinone compound alone.

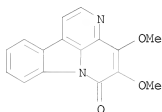
IT 18110-86-6, 4-Methoxy-5-hydroxycanthin-6-one 18110-87-7, 4,5-Dimethoxycanthin-6-one
 RL: ANT (Analyte); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (antiinflammatory and antibacterial composition comprising andrographolides and Picrasma alkaloids)

RN 18110-86-6 CAPLUS

CN 6H-indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



RN 18110-87-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



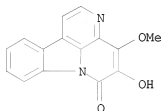
L4 ANSWER 10 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2007:1088615 CAPLUS
 DOCUMENT NUMBER: 147:433500
 TITLE: Use of alkaloids of Picrasma quassioides for preparing preinflammatory factor inhibitors
 INVENTOR(S): Shao, Meng; Liu, Junfeng; Wu, Wei; Han, Fei; Zhai, Dawei; Teng, Houlei
 PATENT ASSIGNEE(S): Hainan Shengke Natural Drugs Research Institute Co., Ltd., Peop. Rep. China
 SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 13pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101036646	A	20070919	CN 2007-10088017	20070308
PRIORITY APPLN. INFO.:			CN 2006-10034348	A 20060313

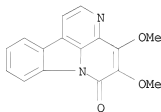
AB The invention relates to the use of Picrasma total alkaloids or its active ingredient canthinone compound (4,5-dimethoxycanthin-6-one or 4-methoxy-5-hydroxycanthin-6-one) as preinflammatory factor inhibitor. The alkaloids are extracted from Picrasma quassioides and have inhibitor effects on preinflammatory factor inhibitors including TNF- α , IL-1 α , IL-1 β , IL-2, IL-6, IL-8, and IFN- γ . The alkaloids are used to produce medicaments as preinflammatory factor inhibitor for the treatment of systemic inflammatory response syndrome, septic shock, multiple organ dysfunction syndrome, rheumatoid arthritis, osteoarthritis, spinal arthritis, inflammatory bowel disease, heart failure, diabetes, psoriasis, acute myeloid leukemia, Parkinson's disease, presenile dementia, depression, Behcet's disease, chronic obstructive pulmonary

disease, asthma, acute pancreatitis, central nerve injury, respiratory viral infection, periodontal disease, bacterial infection, and multiple osteomyelitis.

IT 18110-86-6P, 4-Methoxy-5-hydroxycanthin-6-one 18110-87-7P
 , 4,5-Dimethoxycanthin-6-one
 RL: ANT (Analyte); DMA (Drug mechanism of action); PAC (Pharmacological activity); PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (use of alkaloids of *Picrasma quassioides* for preparing preinflammatory factor inhibitors)
 RN 18110-86-6 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



RN 18110-87-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



L4 ANSWER 11 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:644976 CAPLUS

DOCUMENT NUMBER: 147:108968

TITLE: SPE-LC/MS/MS determination of 4,5-dimethoxy-canthin-one in plasma

AUTHOR(S): Li, Hui; Zhang, Yuan; Lin, Zhexuan; Luo, Wenhong

CORPORATE SOURCE: The Central Laboratory, Medical College, Shantou

University, Shantou, 515041, Peop. Rep. China

SOURCE: Yaowu Fenxi Zazhi (2006), 26(4), 525-527

CODEN: YFZADL; ISSN: 0254-1793

Yaowu Fenxi Zazhi Bianji Weiyuanhui

PUBLISHER:

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB A LC/MS/MS method for quant. determination of 4,5-dimethoxy-canthin-one in plasma

was established. Plasma samples were prepared by C18 solid phase extraction (SPE). LC was performed using mobile phase methanol-0.01 mol/L-1 ammonium acetate (80:20), flow rate 0.2 mL/min-1; and chromatog. column was Waters

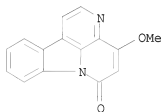
Symmetry C18 (2.1 mm + 50 mm, 3.5 μ m). MS/MS electrospray (ESI) was operated with multiple reaction monitoring (MRM) detection mode, pos. ion, m/z 281.4 \rightarrow 237.1. Linear range for the calibration curve was between 5–100 ng/mL-1 ($r = 0.9999$). Spike recoveries were between 98.3–107% with within-day and day-to-day RSDs less than 5.1%. The method is sensitive, rapid and reliable for the quant. determination of 4,5-dimethoxy-canthin-one in plasma.

IT 5023-08-5

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SPE-LC/MS/MS determination of 4,5-dimethoxy-canthin-one in plasma)

RN 5023-08-5 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-methoxy- (CA INDEX NAME)



L4 ANSWER 12 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:639128 CAPLUS

DOCUMENT NUMBER: 148:49835

TITLE: Two new alkaloidal glycosides from the root bark of *Ailanthus altissima*

AUTHOR(S): Zhang, L.-P.; Wang, J.-Y.; Wang, W.; Cui, Y.-X.; Cheng, D.-L.

CORPORATE SOURCE: College of Chemistry and Chemical Engineering, State Key Laboratory of Applied Organic Chemistry, Lanzhou University, Lanzhou, 730000, Peop. Rep. China

SOURCE: Journal of Asian Natural Products Research (2007), 9(3), 253-259

CODEN: JANRFI; ISSN: 1028-6020

PUBLISHER: Taylor & Francis Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Two new alkaloidal glycosides, canthin-6-one-5-O- β -D-xylopyranosyl-(1 \rightarrow 6)- β -D-glucopyranoside (1) and canthin-6-one-1-O- β -D-xylopyranosyl-(1 \rightarrow 6)- β -D-glucopyranoside (2) named ailantcanthinosides A and B, were isolated from the root bark of *Ailanthus altissima*. Their structures were elucidated by one- and two-dimensional 1 H NMR, 13 C NMR, FAB-MS, HRESI-MS spectra and chemical methods.

IT 960002-00-0P, Ailantcanthinoside A

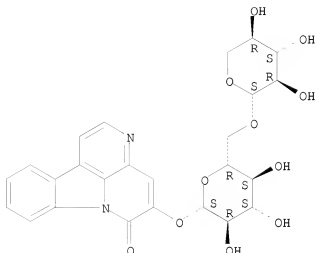
RL: BSU (Biological study, unclassified); NPO (Natural product occurrence); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)

(two new alkaloidal glycosides from the root bark of *Ailanthus altissima*)

RN 960002-00-0 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one,
5-[(6-O- β -D-xylopyranosyl- β -D-glucopyranosyl)oxy]- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:15323 CAPLUS

DOCUMENT NUMBER: 146:414325

TITLE: Effects of canthin-6-one alkaloids from Zanthoxylum chiloperone on Trypanosoma cruzi-infected mice

AUTHOR(S): Ferreira, Maria Elena; Nakayama, Hector; Rojas de Arias, Antonieta; Schinini, Alicia; de Bilbao, Ninfa Vera; Serna, Elva; Lagoutte, Delphine; Soriano-Agaton, Flor; Poupon, Erwan; Hocquemiller, Reynald; Fournet, Alain

CORPORATE SOURCE: Department of Tropical Medicine, Casilla de Correo, Instituto de Investigaciones en Ciencias de la Salud Asuncion, Universidad Nacional de Asuncion, 2511, Parag.

SOURCE: Journal of Ethnopharmacology (2007), 109(2), 258-263
CODEN: JOETD7; ISSN: 0378-8741

PUBLISHER: Elsevier B.V.

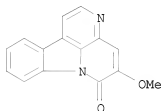
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Canthin-6-one (1), isolated from Zanthoxylum chiloperone (Rutaceae), possesses a broad spectrum of antifungal and leishmanicidal activities. In this study, we have examined the antiparasitic effects of canthin-6-one (1), 5-methoxycanthin-6-one (2), canthin-6-one N-oxide (3), as well as that of the total alkaloids of Zanthoxylum chiloperone stem bark, in Balb/c mice infected either acutely or chronically with Trypanosoma cruzi. The comps. were administered orally or s.c. at 5 mg/kg/day for 2 wk, whereas the alkaloidal extract was given at 50 mg/kg/day for 2 wk. The antiparasitic activity was compared with that of benznidazole given at 50 mg/kg/day for 2 wk. In the case of acute infection, parasitemia was significantly reduced following oral treatment with canthin-6-one (1). Moreover, the total alkaloids of Zanthoxylum chiloperone stem bark led to high levels of parasitol. clearance. Seventy days post-infection, the serol. response in the acute model was significantly different between oral canthin-6-one (1) and benznidazole-treated mice. Chronic model of the disease showed that both canthin-6-one (1) and the alkaloidal extract at the above dosage induced 80-100% animal survival compared to untreated

controls. These results indicate that canthin-6-one (1) exhibits trypanocidal activity in vivo in the mouse model of acute or chronic infection. This is the first demonstration of anti-Trypanosoma cruzi activity for a member of this chemical group (canthinones). Considering the very low toxicity of canthin-6-one (1), our results suggest that long-term oral treatment with this natural product could prove advantageous compared to the current chemotherapy of Chagas disease.

IT 15071-56-4, 5-Methoxycanthin-6-one
 RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses) (effects of canthin-6-one alkaloids from Zanthoxylum chiloperone on Trypanosoma cruzi-infected mice)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN

ACCESSION NUMBER: 2005:1225787 CAPLUS

DOCUMENT NUMBER: 144:225850

TITLE: Anti-inflammatory evaluation and phytochemical characterization of some plants of the Zanthoxylum genus

AUTHOR(S): Marquez, Lucia; Agüero, Juan; Hernandez, Ivones; Garrido, Gabino; Martínez, Ioanna; Dieguez, Rodrigo; Prieto, Sylvia; Rivas, Yahelis; Molina-Torres, Jorge; Curini, Massimo; Delgado, Rene

CORPORATE SOURCE: Laboratorio de Farmacología, Departamento de Investigaciones Biomédicas, Centro de Química Farmacéutica, Ciudad de La Habana, A.P. 16042, Cuba
 SOURCE: Acta Farmacéutica Bonaerense (2005), 24(3), 325-330
 CODEN: AFBODJ; ISSN: 0326-2383

PUBLISHER: Colegio de Farmacéuticos de la Provincia de Buenos Aires

DOCUMENT TYPE: Journal

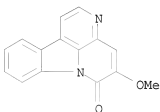
LANGUAGE: English

AB This study examines the anti-inflammatory activity of some species of Zanthoxylum genus. We evaluated 4 ethanolic exts. from stem bark of Zanthoxylum elephantiasis Macf., Z. fagara (L.) Sargent., Z. martinicense (Lam.) DC, and from fruits of Z. coriaceum A. Rich. species. We used phorbol myristate acetate (PMA) and arachidonic acid (AA)-induced mouse ear edema as models of acute inflammation. The exts. of Z. coriaceum and Z. fagara (1-3 mg/ear) were active against the AA and PMA application on mouse edema. Z. elephantiasis extract (0.5-2 mg/ear) exhibited an anti-inflammatory effect in AA application. In the PMA model it was also effective, at all assayed doses. Ethanolic extract of Z. martinicense (1-3 mg/ear) was active on AA induced edema however; it was not effective in the PMA model. Considering the relevant anti-inflammatory effect

exhibited by *Z. elephantiasis* extract we decided to analyze the chemical composition of extract by gas chromatog. coupled to mass spectrometry (GC-MS). Among others, 3 alkaloids, 1 coumarin, 1 lignan, 3 amides and 5 steroids were found in analyzed fractions.

IT 15071-56-4P, 5-Methoxycanthin-6-one
 RL: NPO (Natural product occurrence); PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
 (5-methoxycanthin-6-one was observed in acetone extract of *Zanthoxylum elephantiasis* stem bark by gas chromatog. coupled to mass spectrometry)

RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:1206269 CAPLUS

DOCUMENT NUMBER: 144:397803

TITLE: Phytochemical and antiulcerogenic properties of rhizomes from *Simaba ferruginea* St. Hill. (Simaroubaceae)

AUTHOR(S): Noldin, Vania Floriani; Martins, Domingos Tabajara de Oliveira; Marcello, Cesar Marcos; Lima, Joaquim Corsino da Silva; Delle Monache, Franco; Cechinel Filho, Valdir

CORPORATE SOURCE: Programa de Mestrado em Ciencias Farmaceuticas e Nucleo de Investigacoes Quimico-Farmaceuticas (NIQFAR), Universidade do Vale do Itajai (UNIVALI), Itajai, 88302-202, Brazil

SOURCE: Zeitschrift fuer Naturforschung, C: Journal of Biosciences (2005), 60(9/10), 701-706
 CODEN: ZNCBDA; ISSN: 0939-5075

PUBLISHER: Verlag der Zeitschrift fuer Naturforschung

DOCUMENT TYPE: Journal

LANGUAGE: English

AB *Simaba ferruginea* (Simaroubaceae) is a Brazilian medicinal plant used in traditional medicine to treat several ailments, including gastric ulcers, fever, diarrhea, and dolorous and inflammatory processes. This study examines the chemical composition and antiulcerogenic effects of rhizomes from this plant. Bioassay-guided fractionation led to the isolation of 2 bioactive indole alkaloids called canthin-6-one (1) and 4-methoxycanthin-6-one (2). The alkaloid fraction and both alkaloids demonstrated potent antiulcerogenic effects when evaluated in gastric lesion-induced animals, as well as significant antinociceptive activity in mice. These results confirm and justify the popular use of *S. ferruginea* against gastric ulcers and dolorous processes.

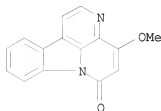
IT 5023-08-5P, 4-Methoxycanthin-6-one

RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(phytochem., and antiulcer and analgesic properties of rhizomes from *Simaba ferruginea*)

RN 5023-08-5 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 16 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:1146741 CAPLUS

DOCUMENT NUMBER: 144:48177

TITLE: Extraction, Hemisynthesis, and Synthesis of Canthin-6-one Analogues. Evaluation of Their Antifungal Activities

AUTHOR(S): Soriano-Agaton, Flor; Lagoutte, Delphine; Poupon, Erwan; Roblot, Francois; Fournet, Alain; Gantier, Jean-Charles; Hocquemiller, Reynald

CORPORATE SOURCE: Laboratoire de Pharmacognosie Associe au CNRS (UMR 8076 BioCIS) and Laboratoire de Biologie et Controle des Organismes Parasites Centre d'Etudes Pharmaceutiques, Universite Paris-Sud 11, Chatenay-Malabry, 92296, Fr.

SOURCE: Journal of Natural Products (2005), 68(11), 1581-1587 CODEN: JNPRDF; ISSN: 0163-3864

PUBLISHER: American Chemical Society-American Society of Pharmacognosy

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 144:48177

AB Zanthoxylum chiloperone var. angustifolium was investigated. Alkaloids 1-3 from the canthin-6-one series were characterized. Derivs. 7-28 were prepared by hemisynthesis or total synthesis. All compds. were tested for in vitro antifungal activities against five pathogenic fungal strains. Analogs of canthin-6-one did not show better antifungal activities.

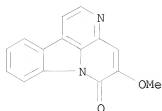
IT 15071-56-4, 5-Methoxycanthin-6-one

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)

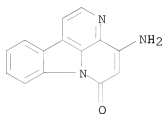
(extraction, hemisynthesis, and synthesis of canthin-6-one analogs in Zanthoxylum)

RN 15071-56-4 CAPLUS

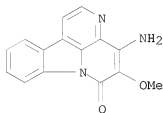
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



IT 871131-76-9P, 4-Aminocanthin-6-one
 RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (extraction, hemisynthesis, and synthesis of canthin-6-one analogs in Zanthoxylum)
 RN 871131-76-9 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-amino- (CA INDEX NAME)



IT 871131-77-0P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (extraction, hemisynthesis, and synthesis of canthin-6-one analogs in Zanthoxylum)
 RN 871131-77-0 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-amino-5-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2005:481411 CAPLUS
 DOCUMENT NUMBER: 143:474935
 TITLE: Cytotoxic constituents of the twigs of Simarouba glauca collected from a plot in southern Florida
 AUTHOR(S): Rivero-Cruz, J. Fausto; Lezutekong, Raphael; Lobo-Echeverri, Tatiana; Ito, Aiko; Mi, Qiwen; Chai,

Hee-Byung; Soejarto, Djaja D.; Cordell, Geoffrey A.; Pezzuto, John M.; Swanson, Steven M.; Morelli, Ivano; Kinghorn, A. Douglas

CORPORATE SOURCE: Program for Collaborative Research in the Pharmaceutical Sciences and Departments of Medical Chemistry and Pharmacognosy, College of Pharmacy, University of Illinois at Chicago, Chicago, IL, 60612, USA

SOURCE: Phytotherapy Research (2005), 19(2), 136-140
CODEN: PHYREH; ISSN: 0951-418X

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

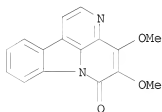
LANGUAGE: English

AB Activity-guided fractionation of a chloroform-soluble extract of *Simarouba glauca* twigs collected from a plot in southern Florida, and monitored with a human epidermoid (KB) tumor cell line, afforded six canthin-6-one type alkaloid derivs., canthin-6-one (1), 2-methoxycanthin-6-one (2), 9-methoxycanthin-6-one (3), 2-hydroxycanthin-6-one (4), 4,5-dimethoxycanthin-6-one (5) and 4,5-dihydroxycanthin-6-one (6), a limonoid, melianodiol (7), an acyclic squalene-type triterpenoid, 14-deacetylerylene (8), two coumarins, scopoletin (9) and fraxidin (10), and two triglycerides, triolein (11) and trilinolein (12). Among these isolates, compds. 1-4, 7 and 8 exhibited cytotoxic activity against several human cancer cell lines. 14-Deacetylerylene (8) was selectively active against the Lul human lung cancer cell line, but was inactive in an in vivo hollow fiber assay using this same cell type.

IT 18110-87-7P, 4,5-Dimethoxycanthin-6-one 18110-89-9P, 4,5-Dihydroxycanthin-6-one
RL: BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation) (cytotoxic constituents of the twigs of *Simarouba glauca* collected from a plot in southern Florida)

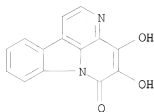
RN 18110-87-7 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



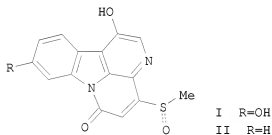
RN 18110-89-9 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dihydroxy- (CA INDEX NAME)



REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 18 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN
 ACCESSION NUMBER: 2004:1101365 CAPLUS
 DOCUMENT NUMBER: 142:173145
 TITLE: An unusual series of thiomethylated canthin-6-ones from the North American Mushroom *Boletus curtisii* Broeckelmann, Martin G.; Dasenbrock, Johannes; Steffan, Bert; Steglich, Wolfgang; Wang, Yuekui; Raabe, Gerhard; Fleischhauer, Joerg
 CORPORATE SOURCE: Department Chemie, Ludwig-Maximilians-Universitaet Muenchen, Munich, 81377, Germany
 SOURCE: European Journal of Organic Chemistry (2004), (23), 4856-4863
 CODEN: EJOCFK; ISSN: 1434-193X
 PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



AB A unique set of thiomethylated canthin-6-one derivs. was isolated from *Boletus curtisii*. The bright yellow color of this mushroom is caused by two optically active canthin-6-one sulfoxides for which the names curtisin (I) and 9-deoxycurtisin (II) are proposed. The structures of the new compds. were established by MS and NMR methods and the absolute configuration of the sulfoxides determined by quantum chemical calcns. This is the first occurrence of canthin-6-one alkaloids outside of higher plants. The chemotaxonomic implications of these findings are discussed.

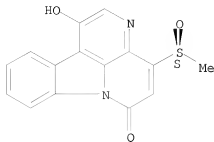
IT 832712-28-4P, 9-Deoxycurtisin
 RL: BSU (Biological study, unclassified); NPO (Natural product occurrence); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
 (thiomethylated canthinones from *Boletus curtisii*)

RN 832712-28-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one,

10/535,430

1-hydroxy-4-[(S)-methylsulfinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



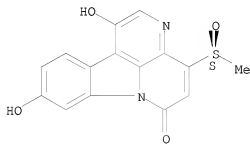
IT 832721-72-9P, Curtisine

RL: BSU (Biological study, unclassified); NPO (Natural product occurrence); PRP (Properties); PUR (Purification or recovery); RCT (Reactant); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); RACT (Reactant or reagent)
(thiomethylated canthinones from *Boletus curtisii*)

RN 832721-72-9 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one,
1,9-dihydroxy-4-[(S)-methylsulfinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

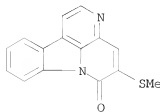


IT 157770-30-4P 500299-14-9P

RL: BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(thiomethylated canthinones from *Boletus curtisii*)

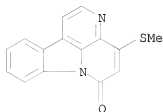
RN 157770-30-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(methylthio)- (CA INDEX NAME)

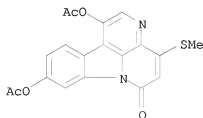


RN 500299-14-9 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-(methylthio)- (CA INDEX NAME)

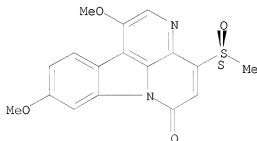


IT 832712-26-2P, O,O-Diacetyl-S-deoxycurtisin 832712-33-1P,
O,O-Dimethylcurtisin 832712-35-3P,
O,O-Bis(4-bromobenzoyl)curtisin
RL: BSU (Biological study, unclassified); PRP (Properties); PUR
(Purification or recovery); SPN (Synthetic preparation); BIOL (Biological
study); PREP (Preparation)
(thiomethylated canthinones from *Boletus curtisii*)
RN 832712-26-2 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one,
1,9-bis(acetyloxy)-4-(methylthio)- (CA INDEX NAME)



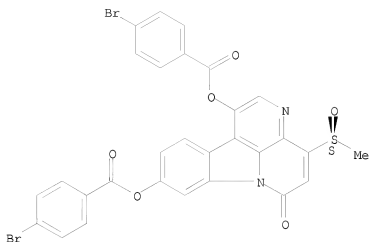
RN 832712-33-1 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one,
1,9-dimethoxy-4-[(S)-methylsulfinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 832712-35-3 CAPLUS
CN Benzoic acid, 4-bromo-, 4-[(S)-methylsulfinyl]-6-oxo-6H-indolo[3,2,1-
de][1,5]naphthyridine-1,9-diyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 19 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:734307 CAPLUS

DOCUMENT NUMBER: 141:350063

TITLE: Synthesis of some fused β -carbolines including the first example of the pyrrolo[3,2-c]- β -carboline system

AUTHOR(S): Condie, Glenn C.; Bergman, Jan

CORPORATE SOURCE: Unit for Organic Chemistry, CNT, Department of Biosciences at Novum, Karolinska Institute, Huddinge, SE-141 57, Swed.

SOURCE: Journal of Heterocyclic Chemistry (2004), 41(4), 531-540

CODEN: JHTCAD; ISSN: 0022-152X

PUBLISHER: HeteroCorporation

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 141:350063

AB Condensation of 1-methyl- β -carboline-3-carbaldehyde with Et azidoacetate and subsequent thermolysis of the resulting azidopropenoate was used to [c] annulate a pyrrole ring onto the β -carboline moiety, thus producing the first example of the pyrrolo[3,2-c]- β -carboline ring system. The latter ring system results from cyclization at the C-4 carbon, whereas cyclization at the N-2 nitrogen atom also occurs to form a pyrrolo[3,2-c]- β -carboline ring system. Condensation of β -carboline-1-carbaldehyde with Et azidoacetate produced a non-isolable intermediate, which immediately underwent cyclization; however, in this case cyclization occurred via attack at the ester and the azide remained intact. The resulting 5-azidocanthin-6-one was transformed to the first examples of 5-aminocanthin-6-ones.

β -Carboline-1,3-dicarbaldehyde failed to give an acceptable reaction with Et azidoacetate, but did undergo selective condensation with di-Me acetylenedicarboxylate at the C-1 carbaldehyde with concomitant cyclization to form a highly functionalized 2-formylcanthine derivative

IT 777062-77-8P 777062-78-9P 777062-79-0P

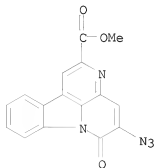
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of fused β -carbolines)

RN 777062-77-8 CAPLUS

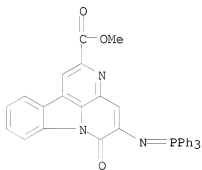
10/535,430

CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-2-carboxylic acid, 5-azido-6-oxo-, methyl ester (CA INDEX NAME)



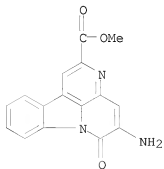
RN 777062-78-9 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-2-carboxylic acid, 6-oxo-5-[(triphenylphosphoranylidene)amino]-, methyl ester (CA INDEX NAME)



RN 777062-79-0 CAPLUS

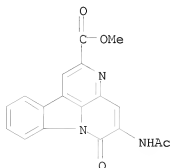
CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-2-carboxylic acid, 5-amino-6-oxo-, methyl ester (CA INDEX NAME)



IT 777062-80-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of fused β -carboline)

RN 777062-80-3 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-2-carboxylic acid,
 5-(acetylamino)-6-oxo-, methyl ester (CA INDEX NAME)



REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 20 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:432755 CAPLUS

DOCUMENT NUMBER: 140:412295

TITLE: Use of canthin-6-one and plant extracts containing it
 and its derivatives for the treatment of the Chagas'
 disease

INVENTOR(S): Ferreira, Marie Elena; Fournet, Alain; Rojas De Arias,
 Antonieta; Hocquemiller, Reynald

PATENT ASSIGNEE(S): Institut De Recherche Pour Le Developpement I.R.D.,
 Fr.; Universite Nationale D'Ascuncion

SOURCE: Fr. Demande, 18 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2847474	A1	20040528	FR 2002-14729	20021125
FR 2847474	B1	20060324		
WO 2004050092	A1	20040617	WO 2003-FR3459	20031124
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003294057	A1	20040623	AU 2003-294057	20031124
EP 1569642	A1	20050907	EP 2003-789474	20031124
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003016441	A	20051011	BR 2003-16441	20031124
US 20070149461	A1	20070628	US 2006-535430	20060222

PRIORITY APPLN. INFO.:

FR 2002-14729
WO 2003-FR3459A 20021125
W 20031124

OTHER SOURCE(S): MARPAT 140:412295

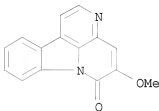
AB Use of plant exts. containing canthin-6-one, in the form of an extract of *Zanthoxylum chiloperone angustifolium*, and some of its derivs. for the manufacture of a drug intended for the treatment of trypanosomiasis, in particular treatment of Chagas' disease, is disclosed. Canthin-6-one and 5-methoxycanthin-6-one were extracted from *Z. chiloperone*. Efficacy of canthin-6-one in the treatment of guinea pigs infected. with *Trypanosoma cruzi* is shown.

IT 15071-56-4, 5-Methoxy-canthin-6-one

RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses) (use of canthinone and plant exts. containing it and its derivs. for treatment of Chagas' disease)

RN 15071-56-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 21 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:50455 CAPLUS

DOCUMENT NUMBER: 140:314482

TITLE: Cytotoxic and antimalarial constituents from the roots of *Eurycoma longifolia*

AUTHOR(S): Kuo, Ping-Chung; Damu, Amooru G.; Lee, Kuo-Hsiung; Wu, Tian-Shung

CORPORATE SOURCE: Department of Chemistry, National Cheng Kung University, Tainan, 701, Taiwan

SOURCE: Bioorganic & Medicinal Chemistry (2004), 12(3), 537-544

CODEN: BMECEP; ISSN: 0968-0896

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Sixty-five compds. were isolated from the roots of *Eurycoma longifolia* and characterized by comprehensive analyses of their 1D and 2D NMR, and mass spectral data. Among these isolates, four quassinoid diterpenoids were reported from natural sources for the first time, namely eurycomalide A (1), eurycomalide B (2), 13 β ,21-dihydroxyeurycomanol (3), and 5 α ,14 β ,15 β -trihydroxyklaineanone (4). Screening of cytotoxicity, anti-HIV and antimalarial activity of these isolated compds. was also furnished by in vitro assays. Compds. 12, 13, 17, 18, 36, 38, 59, and 62 demonstrated strong cytotoxicity toward human lung cancer (A-549) cell lines, however, 12, 13, 17, 38, 57, 58, and 59 exhibited strong cytotoxicity toward human breast cancer (MCF-7) cell lines. Compds. 57 and 58 displayed potent antimalarial activity against the resistant *Plasmodium falciparum*. The thorough studies on the stereochem.

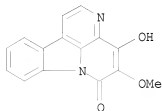
of the different quassinoid diterpenoids provide a clear reference to the scientists who are interested on this field.

IT 101219-61-8

RL: PAC (Pharmacological activity); BIOL (Biological study)
(cytotoxic and antimalarial constituents from roots of *Eurycoma longifolia*)

RN 101219-61-8 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-hydroxy-5-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 22 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:753390 CAPLUS

DOCUMENT NUMBER: 139:361632

TITLE: Cytotoxic and antimalarial β -carboline alkaloids from the roots of *Eurycoma longifolia*

AUTHOR(S): Kuo, Ping-Chung; Shi, Li-Shian; Damu, Amooru G.; Su, Chung-Ren; Huang, Chieh-Hung; Ke, Chih-Huang; Wu, Jin-Bin; Lin, Ai-Jeng; Bastow, Kenneth F.; Lee, Kuo-Hsiung; Wu, Tian-Shung

CORPORATE SOURCE: Department of Chemistry, National Cheng Kung University, Tainan, 701, Taiwan

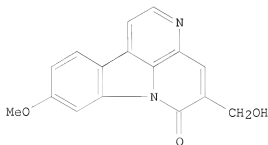
SOURCE: Journal of Natural Products (2003), 66(10), 1324-1327
CODEN: JNPRDF; ISSN: 0163-3864

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

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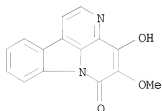


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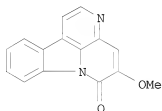
AB Three new β -carboline alkaloids [n-pentyl β -carboline-1-propionate, 5-hydroxymethyl-9-methoxycanthin-6-one (I), and 1-hydroxy-9-methoxycanthin-6-one] and 19 known β -carbolines were isolated from the roots of *Eurycoma longifolia*. The new structures were

determined by comprehensive analyses of their 1D and 2D NMR and mass spectral data and by chemical transformation. These compds. were screened for in vitro cytotoxic and antimalarial activities, and 9-methoxycanthin-6-one and canthin-6-one demonstrated significant cytotoxicity against human lung cancer (A-549) and human breast cancer (MCF-7) cell lines.

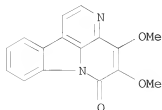
IT 101219-61-8, Picrasidine Q
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
 BIOL (Biological study)
 (cytotoxic alkaloid from *Eurycoma longifolia*)
 RN 101219-61-8 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-hydroxy-5-methoxy- (CA
 INDEX NAME)



IT 15071-56-4, 5-Methoxycanthin-6-one 18110-87-7,
 4,5-Dimethoxycanthin-6-one 89915-37-7,
 5-Hydroxymethylcanthin-6-one
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (from *Eurycoma longifolia*)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)

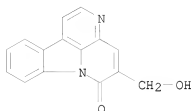


RN 18110-87-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX
 NAME)

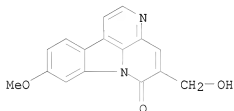


RN 89915-37-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(hydroxymethyl)- (CA INDEX
 NAME)

NAME)

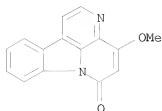


IT 622408-84-8P
 RL: NPO (Natural product occurrence); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
 (isolation from *Eurycoma longifolia* roots and structure of)
 RN 622408-84-8 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(hydroxymethyl)-9-methoxy- (CA INDEX NAME)

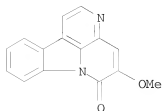


REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 23 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2003:679560 CAPLUS
 DOCUMENT NUMBER: 140:2829
 TITLE: Study on chemical constituents from *Drymaria diandra* BL
 AUTHOR(S): Yang, Xue-qiong; Rong, Huang; Bao, Zhi-juan; Ding, Zhong-tao
 CORPORATE SOURCE: Department of Chemistry, Yunnan University, Kunming, 650091, Peop. Rep. China
 SOURCE: Yunnan Daxue Xuebao, Ziran Kexueban (2003), 25(4), 358-360
 CODEN: YDXKES; ISSN: 0258-7971
 PUBLISHER: Yunnan Daxue Xuebao Bianjibu
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese
 AB Four compds. were isolated from *Drymaria diandra* BL. They were identified as 3-acetyloleanolic acid, cordatanine, β -sitosterol and β -daucosterol by spectral anal., chemical and phys. consts.
 IT 5023-08-5, Cordatanine
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (constituents from *Drymaria diandra*)
 RN 5023-08-5 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-methoxy- (CA INDEX NAME)

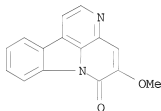


L4 ANSWER 24 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN
 ACCESSION NUMBER: 2003:577194 CAPLUS
 DOCUMENT NUMBER: 139:227158
 TITLE: Antifungal compounds from *Zanthoxylum chiloperone* var. *angustifolium*
 AUTHOR(S): Thouvenel, Celine; Gantier, Jean-Charles; Duret, Philippe; Fourneau, Christophe; Hocquemiller, Reynald; Ferreira, Maria-Elena; Rojas de Arias, Antonieta; Fournet, Alain
 CORPORATE SOURCE: Faculte de Pharmacie, Laboratoire de Pharmacognosie UPRES-A 8076 CNRS (BIOCIS), Chateauf-Malabry, 92296, Fr.
 SOURCE: Phytotherapy Research (2003), 17(6), 678-680
 CODEN: PHYREH; ISSN: 0951-418X
 PUBLISHER: John Wiley & Sons Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB An alkaloidal extract of the stem barks of *Zanthoxylum chiloperone* var. *angustifolium* exhibited antifungal activity against *Candida albicans*, *Aspergillus fumigatus* and *Trichophyton mentagrophytes* var. *interdigitale* using a TLC bioautog. method. Bioassay-guided fractionation of this extract resulted in the isolation of two active compds. identified as canthin-6-one and 5-methoxycanthin-6-one. Canthin-6-one exhibited a broad spectrum of activities against *Aspergillus fumigatus*, *A. niger*, *A. terreus*, *Candida albicans*, *C. tropicalis*, *C. glabrata*, *Cryptococcus neoformans*, *Geotrichum candidum*, *Saccharomyces cerevisiae*, *Trichosporon beigelii*, *Trichosporon cutaneum* and *Trichophyton mentagrophytes* var. *interdigitale* with MICs values between 5.3 and 46 $\mu\text{mol/L}$. 5-Methoxy-canthin-6-one was active against only *Trichophyton mentagrophytes* var. *interdigitale* with a MIC value of 12.3 $\mu\text{mol/L}$.
 IT 15071-56-4, 5-Methoxycanthin-6-one
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (antifungal compds. from *Zanthoxylum chiloperone angustifolium*)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

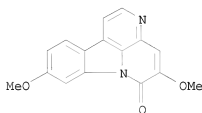
L4 ANSWER 25 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2003:27796 CAPLUS
 DOCUMENT NUMBER: 138:300452
 TITLE: 5-methoxycanthin-6-one from *Leitneria floridana* (Simaroubaceae)
 AUTHOR(S): Readell, Karin E.; Seigler, David S.; Young, David A.
 CORPORATE SOURCE: Department of Plant Biology, University of Illinois, Urbana, IL, 61801, USA
 SOURCE: Biochemical Systematics and Ecology (2003), 31(2), 167-170
 CODEN: BSECBU; ISSN: 0305-1978
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Corkwood, *Leitneria floridana*, a shrub found in low, wet areas of the southeastern United States, has been considered to belong to the monotypic family Leitneriaceae, a family formerly considered to be of uncertain taxonomic affinities, but is now generally conceded to be part of the Simaroubaceae. Methanolic extraction of the wood yields a series of alkaloids (based on the Dragendorff test), of which the major component is 5-methoxycanthin-6-one. This compound was purified by thin layer chromatog. and the structure elucidated by ¹H-NMR, EIMS and exact mass of the parent ion. Because indole alkaloids of the canthin-6-one type have only been isolated from the Rutaceae and Simaroubaceae, the presence of 5-methoxycanthin-6-one in *Leitneria floridana* further supports placement of this enigmatic species in or near the Simaroubaceae.
 IT 15071-56-4, 5-Methoxycanthin-6-one
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (5-methoxycanthin-6-one from *Leitneria floridana* (Simaroubaceae))
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 26 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002:531066 CAPLUS
 DOCUMENT NUMBER: 138:69881
 TITLE: Canthin-6-one alkaloids from callus cultures of *Eurycoma longifolia*
 AUTHOR(S): Kanchanapoom, Tripetch; Chumsri, Phannipha; Sonchai, Suttikan; Kasai, Ryoji; Yamasaki, Kazuo
 CORPORATE SOURCE: Institute of Pharmaceutical Sciences, Hiroshima University, Hiroshima, 734-8551, Japan
 SOURCE: Natural Medicines (Tokyo, Japan) (2002), 56(2), 55-58
 CODEN: NMEDEO; ISSN: 1340-3443

PUBLISHER: Japanese Society of Pharmacognosy
 DOCUMENT TYPE: Journal
 LANGUAGE: Japanese
 AB Four alkaloids, 9-methoxycanthin-6-one, 9-hydroxycanthin-6-one, 5,9-dimethoxycanthin-6-one and 9-methoxycanthin-6-one N-oxide were isolated from the callus cultures of *Eurycoma longifolia* (Simaroubaceae). Their structures were based on analyses of spectroscopic data.
 IT 155861-54-4P
 RL: PUR (Purification or recovery); PREP (Preparation)
 (canthin-6-one alkaloids from callus cultures of *Eurycoma longifolia*)
 RN 155861-54-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5,9-dimethoxy- (CA INDEX NAME)

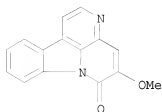


L4 ANSWER 27 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002:339345 CAPLUS
 DOCUMENT NUMBER: 138:280752
 TITLE: Leishmanicidal activity of two canthin-6-one alkaloids, two major constituents of *Zanthoxylum chiloperone* var. *angustifolium*
 AUTHOR(S): Ferreira, M. E.; Rojas de Arias, A.; Torres de Ortiz, S.; Inchausti, A.; Nakayama, H.; Thouvenel, C.; Hocquemiller, R.; Fournet, A.
 CORPORATE SOURCE: Department of Tropical Medicine, Institute de Investigaciones en Ciencias de la Salud, Asuncion, 2511, Parag.
 SOURCE: Journal of Ethnopharmacology (2002), 80(2-3), 199-202
 CODEN: JOETD7; ISSN: 0378-8741
 PUBLISHER: Elsevier Science Ireland Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The crude alkaloidal extract of *Zanthoxylum chiloperone* stem bark exhibited in vitro activity against various strains of *Leishmania* ssp. at 100 µg/mL. Two active major constituents were isolated and identified as canthin-6-one and 5-methoxycanthin-6-one. The effect of these compds. was also tested in an in vivo assay using BALB/c mice infected with *Leishmania amazonensis*. The mice were treated for 5 wk postinfection with these alkaloids by oral (14 days) or intralesional route (4 days) at 10 mg/kg daily. The reference drug, N-methylglucamine antimonate was administered by s.c. injections at 100 mg/kg for 10 days. Intralesional administration of canthin-6-one reduced the parasite burden but not significantly when it was compared with the untreated group, while the reference drug reduced by 91% the parasite loads in the lesion.
 IT 15071-56-4P, 5-Methoxycanthin-6-one
 RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (leishmanicidal activity of two canthin-6-one alkaloids, two major

constituents from stem bark of *Zanthoxylum chiloperone* var.
angustifolium)

RN 15071-56-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 28 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:561534 CAPLUS

DOCUMENT NUMBER: 135:285757

TITLE: A new diprenyl coumarin and alkaloids from the bark of
Zanthoxylum dimorphophyllum (Rutaceae)
 AUTHOR(S): Mai, Huong Doan Thi; Van-Dufat, Hanh Trinh; Michel,
 Sylvie; Tillequin, Francois; Bastien, David; Sevenet,
 Thierry

CORPORATE SOURCE: Laboratoire de Pharmacognosie de l'Universite Rene
 Descartes, U.M.R./C.N.R.S. No 8638, Faculte des
 Sciences Pharmaceutiques et Biologiques, Paris, 75006,
 Fr.

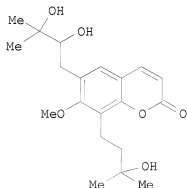
SOURCE: Zeitschrift fuer Naturforschung, C: Journal of
 Biosciences (2001), 56(7/8), 492-494
 CODEN: ZNCBDA; ISSN: 0939-5075

PUBLISHER: Verlag der Zeitschrift fuer Naturforschung

DOCUMENT TYPE: Journal

LANGUAGE: English

GI

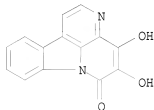


I

AB The alkaloids chelerythrine, norchelerythrine, oxyavicine, canthine-6-one,
 4,5-dihydrocanthin-6-one, and γ -fagarine were isolated from
Zanthoxylum dimorphophyllum bark, together with two coumarins, scoparone
 and dimoxylin (I). This latter is a novel compound whose structure was

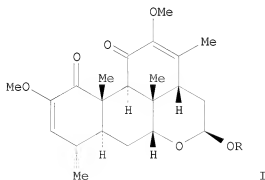
elucidated on the basis of its spectral data.

IT 18110-89-9
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (new diprenyl coumarin and alkaloids from bark of *Zanthoxylum*
dimorphophyllum (Rutaceae))
 RN 18110-89-9 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dihydroxy- (CA INDEX
 NAME)



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 29 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2001:262317 CAPLUS
 DOCUMENT NUMBER: 135:31245
 TITLE: Quassinoids and other constituents from *Picrostima*
crenata
 AUTHOR(S): Krebs, H. C.; Schilling, P. J.; Wartchow, R.; Bolte,
 M.
 CORPORATE SOURCE: Zentrum für Lebensmittelwissenschaften, ZA für
 Chemische Analytik und Endokrinologie, Hannover,
 D-30173, Germany
 SOURCE: Zeitschrift fuer Naturforschung, B: Chemical Sciences
 (2001), 56(3), 315-318
 CODEN: ZNBSEN; ISSN: 0932-0776
 PUBLISHER: Verlag der Zeitschrift fuer Naturforschung
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



AB Two new, 16- β -O-methylneoquassin and 16- β -O-ethylneoquassin (I)

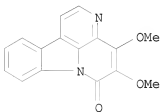
(R = Me, Et), and four known quassinoids have been isolated together with coniferyl aldehyde, coniferin, cantin-6-one, 4,5-dimethoxycantin-6-one and (+)-neo-olivil from the wood of *Picrasma crenata*. Their structures were determined on basis of spectroscopic and X-ray anal.

IT 18110-87-7P

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(isolation and structure of diterpene quassinoids and other constituents from *Picrasma crenata*)

RN 18110-87-7 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 30 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:792843 CAPLUS

DOCUMENT NUMBER: 134:68789

TITLE: Anti-HIV agents 45 and antitumor agents 205. Two new sesquiterpenes, leitneridanins A and B, and the cytotoxic and anti-HIV principles from *Leitneria floridana*

AUTHOR(S): Xu, Zhihong; Chang, Fang-Rong; Wang, Hui-Kang; Kashiwada, Yoshiki; McPhail, Andrew T.; Bastow, Kenneth F.; Tachibana, Yoko; Cosentino, Mark; Lee, Kuo-Hsiung

CORPORATE SOURCE: Natural Products Laboratory Division of Medicinal Chemistry and Natural Products School of Pharmacy, University of North Carolina, Chapel Hill, NC, 27599, USA

SOURCE: Journal of Natural Products (2000), 63(12), 1712-1715
CODEN: JNPRDF; ISSN: 0163-3864

PUBLISHER: American Chemical Society

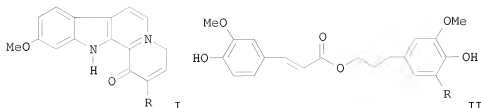
DOCUMENT TYPE: Journal

LANGUAGE: English

GI

LANGUAGE:
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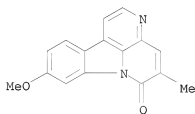
English



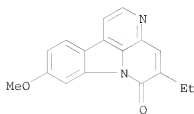
AB Two canthin-6-one alkaloids, luotonins C (I) (R = Me) and D I (R = Et), and two phenylpropanoids, dihydrosinapyl ferulate (II) (R = OMe) and dihydroconiferyl ferulate II (R = H), were isolated from the aerial parts of *Peganum nigellastrum* along with four known alkaloids, harmine, 3-phenylquinoline, 3-(4-hydroxyphenyl)quinoline and 3-(1H-indol-3-yl)quinoline. Their structures were elucidated by spectroscopic techniques. The structures of I were also confirmed by chemical synthesis.

IT 261948-33-8P, Luotonine C 261948-34-9P, Luotonine D
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); SPN (Synthetic preparation); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
 (isolation and structure of alkaloids and phenylpropanoids from *Peganum nigellastrum*)

RN 261948-33-8 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 9-methoxy-5-methyl- (CA INDEX NAME)

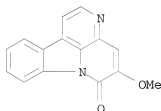


RN 261948-34-9 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-ethyl-9-methoxy- (CA INDEX NAME)



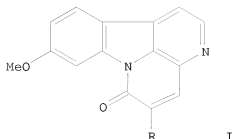
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 32 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2000:160542 CAPLUS
 DOCUMENT NUMBER: 132:234342
 TITLE: Constituents of *Zanthoxylum rugosum* St.-Hil & Tul
 AUTHOR(S): Diehl, Eliana Elisabeth; Von Poser, Gilsane Lino;
 Henriques, Amelia Teresinha
 CORPORATE SOURCE: Curso de Pos Graduacao em Ciencias Farmaceuticas,
 UFRGS, Porto Alegre, 90.610-000, Brazil
 SOURCE: Biochemical Systematics and Ecology (2000), 28(3),
 275-277
 CODEN: BSECBU; ISSN: 0305-1978
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The isolation of anisocoumarin H, 5-methoxycanthin-6-one, canthin-6-one,
 trans-avicennol, trans-avicennin, chelerythrine, and skimmianine from
 dried leaves and roots of *Zanthoxylum rugosum* was described. The
 occurrence of the classes of these compds. was compared with that in other
 species of *Z.* The metabolites showed a relationship to other taxa such as
Z. elephantiasis.
 IT 15071-56-4, 5-Methoxycanthin-6-one
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (constituents of *Zanthoxylum rugosum*)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 33 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1999:776537 CAPLUS
 DOCUMENT NUMBER: 132:234276
 TITLE: The structures of new alkaloid components from *Peganum
 nigellastrum*
 AUTHOR(S): Ma, Zhong-Ze; Hano, Yoshio; Nomura, Taro; Chen,
 Ying-Jie
 CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Toho University,
 Japan
 SOURCE: Tennen Yuki Kagobutsu Toronkai Koen Yoshishu (1999),
 41st, 547-552
 CODEN: TYKYDS
 PUBLISHER: Nippon Kagakkai
 DOCUMENT TYPE: Journal
 LANGUAGE: Japanese
 GI

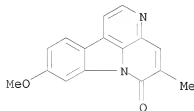


AB Six new alkaloids were isolated from the aerial parts of *Peganum nigellastrum* along with twelve known alkaloids. The structures of the new compds., named luotonin A, B, E, C (I, R = Me), D (I, R = Et), and F, were confirmed by spectroscopic evidence and chemical synthesis. Luotonins A, B, and E were unique alkaloids having a pyrroloquinazolinoquinoline skeleton. Luotonins C and D were the first canthin-6-one derivs. isolated from the genus *Peganum*. Luotonin F, 3-[3(H)-quinazolinone]carbonyl-quinoline, was also a unique alkaloid of the title plant. Total syntheses of all of the compds. were achieved by convenient ways. Luotonin A was synthesized by 3 steps through vasicinone as a key intermediate (Ma, Z. et al., 1999). Canthin-6-one derivs. (I, R = Me, Et) were synthesized by a biomimetic way from harmine coexisting with these alkaloids in the same source. Luotonin F was also synthesized by 6 steps from 3-formylquinoline as a starting material. These new compound 1-6 were tested cytotoxic activity against P-388 cells. Among them, luotonin A (1) was the most potent inhibitor (IC50 1.8 pg/mL).

IT 261948-33-8P, Luotonin C 261948-34-9P, Luotonin D
 RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); SPN (Synthetic preparation); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
 (isolation, biomimetic synthesis and structure of cytotoxic alkaloid from *Peganum nigellastrum*)

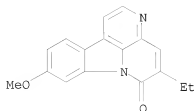
RN 261948-33-8 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 9-methoxy-5-methyl- (CA INDEX NAME)

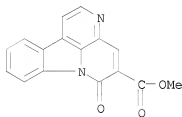


RN 261948-34-9 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-ethyl-9-methoxy- (CA INDEX NAME)



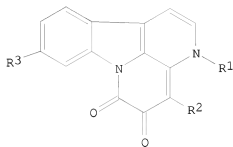
L4 ANSWER 34 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1999:625510 CAPLUS
 DOCUMENT NUMBER: 131:351519
 TITLE: Single electron transfer induced total synthesis of canthin-6-one
 AUTHOR(S): Rossler, Ulrich; Blechert, Siegfried; Steckhan, Eberhard
 CORPORATE SOURCE: Institut für Organische Chemie, Technische Universität Berlin, Berlin, D-10623, Germany
 SOURCE: Tetrahedron Letters (1999), 40(39), 7075-7078
 CODEN: TELEAY; ISSN: 0040-4039
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 131:351519
 AB The cytotoxic alkaloid canthin-6-one was synthesized from harmalane in a short sequence (six steps) with good overall yield (18%) using a single electron transfer (SET) induced radical cationic hetero [4+2] cycloaddn. as high yielding key step.
 IT 55854-61-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (single electron transfer induced total synthesis of canthin-6-one)
 RN 55854-61-0 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-5-carboxylic acid, 6-oxo-, methyl ester (CA INDEX NAME)



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

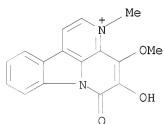
L4 ANSWER 35 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1999:124837 CAPLUS
 DOCUMENT NUMBER: 130:223472
 TITLE: Synthesis and antitumor activity of canthin-5,6-dione derivatives
 AUTHOR(S): Koike, Kazuo; Yoshino, Hiroshi; Nikaido, Tamotsu
 CORPORATE SOURCE: Department of Pharmacognosy, School of Pharmaceutical

SOURCE: Sciences, Toho University, Chiba, 274-8510, Japan
 Heterocycles (1999), 51(2), 315-323
 CODEN: HTCYAM; ISSN: 0385-5414
 PUBLISHER: Japan Institute of Heterocyclic Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 130:223472
 GI



I

AB Syntheses of canthin-5,6-dione derivs. (I) (R1 = Me, Et, Bu; R2, R3 = H, OMe) have been achieved via one step route starting from their resp. β -carbolines. I showed antitumor activities against P-388 murine leukemia cells and PC-6 human lung carcinoma cells.
 IT 221149-85-5P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (crystal structure; synthesis and antitumor activity of canthin-5,6-dione derivs.)
 RN 221149-85-5 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridinium, 5-hydroxy-4-methoxy-3-methyl-6-oxo-, chloride (1:1) (CA INDEX NAME)



● Cl⁻

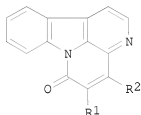
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 36 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1995:668446 CAPLUS
 DOCUMENT NUMBER: 123:92870
 ORIGINAL REFERENCE NO.: 123:16393a,16396a
 TITLE: canthin-6-ones as hair growth stimulants and hair cosmetics containing them

INVENTOR(S): Shaku, Masao; Kuroda, Hideo; Ooba, Ai
 PATENT ASSIGNEE(S): Pola Kasei Kogyo Kk, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

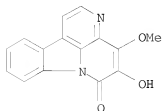
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07112919	A	19950502	JP 1993-258549	19931015
PRIORITY APPLN. INFO.:			JP 1993-258549	19931015
OTHER SOURCE(S):	MARPAT	123:92870		

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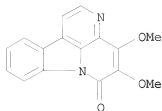


I

- AB Hair cosmetics contain canthin-6-ones I (R1, R2, R3 = H, OH, OMe) as hair growth stimulants. Dry root (10 kg) of *Peucedanum praeruptorum* were extracted with a mixture of 20 L H2O and 20 L EtOH by heating at 105° for 4 h and the extract was fractionated to give canthin-6-one (II) 1.14, 4,5-dimethoxycanthin-6-one 1.36, and 5-hydroxy-4-methoxycanthin-6-one 1.09 g. II stimulated the growth of hair and prevented the graying of hair in mice.
- IT 18110-86-6P, 5-Hydroxy-4-methoxycanthin-6-one 18110-87-7P, 4,5-Dimethoxycanthin-6-one
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (hair growth stimulants containing canthin-6-ones)
- RN 18110-86-6 CAPLUS
- CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



- RN 18110-87-7 CAPLUS
- CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



L4 ANSWER 37 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1995:282536 CAPLUS

DOCUMENT NUMBER: 122:128592

ORIGINAL REFERENCE NO.: 122:23875a,23878a

TITLE: Indonesian medicinal plants. VIII. Chemical structures of three new triterpenoids, bruceajavanin A, dihydrobruceajavanin A, and bruceajavanin B, and a new alkaloidal glycoside, bruceacanthinoside, from the stems of *Brucea javanica*.

AUTHOR(S): Kitagawa, Isao; Mahmud, Taifo; Simanjuntak, Partomuan; Hori, Kazuyuki; Uji, Tahan; Shibuya, Hirotaka
CORPORATE SOURCE: Fac. Pharmaceutical Sci., Osaka Univ., Suita, 565, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1994), 42(7), 1416-21

CODEN: CPBTAL; ISSN: 0009-2363

PUBLISHER: Pharmaceutical Society of Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

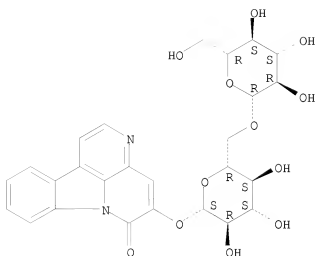
AB Three new apotirucallane-type triterpenoids named bruceajavanin A (I; R = Acetyl), dihydrobruceajavanin A (1,2-dihydro derivative of bruceajavanin A), and bruceajavanin B I (R = Methyl), and a novel β -carboline alkaloidal glycoside named bruceacanthinoside (II) were isolated from the stems of *B. javanica*, a traditional medicine used to treat malaria. Their chemical structures have been elucidated on the bases of their chemical and physicochem. properties. I (R = Acetyl), 1,2-dihydro I (R = Acetyl) and II inhibited the growth of a cultured *Plasmodium falciparum* chloroquine-resistant strain.

IT 159194-91-9P, Bruceacanthinoside
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(antimalarials from *Brucea javanica*)

RN 159194-91-9 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one,
5-[(6-O- β -D-glucopyranosyl- β -D-glucopyranosyl)oxy]- (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 38 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN

ACCESSION NUMBER: 1994:697153 CAPLUS

DOCUMENT NUMBER: 121:297153

ORIGINAL REFERENCE NO.: 121:54283a,54286a

TITLE: Canthin-6-one alkaloids from *Brucea mollis* var. *tonkinensis*

AUTHOR(S): Ouyang, Yishan; Koike, Kazuo; Ohmoto, Taichi

CORPORATE SOURCE: Sch. Pharmaceutical Sci., Toho Univ., Funabashi, 274, Japan

SOURCE: Phytochemistry (1994), 36(6), 1543-6

CODEN: PYTCAS; ISSN: 0031-9422

DOCUMENT TYPE: Journal

LANGUAGE: English

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Three new alkaloids were isolated from the root-wood of *Brucea mollis* var. *tonkinensis* collected in China. Their structures were determined to be I (bruceolline A), II (bruceolline B), and III (11-hydroxycanthin-6-one-N-oxide) by chemical and spectral methods. In addition, two known alkaloids, canthin-6-one and canthin-6-one-N-oxide, were isolated.

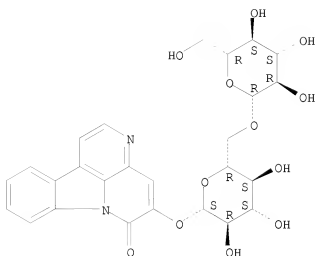
IT 159194-91-9P, Bruceolline B

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(isolation and structure of canthin-6-one alkaloids from *Brucea mollis* var. *tonkinensis*)

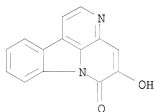
RN 159194-91-9 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one,
5-[(6-O-β-D-glucopyranosyl-β-D-glucopyranosyl)oxy]- (CA INDEX NAME)

Absolute stereochemistry.



IT 64118-73-6P, 5-Hydroxycanthin-6-one
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 64118-73-6 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy- (CA INDEX NAME)



L4 ANSWER 39 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1994:651344 CAPLUS

DOCUMENT NUMBER: 121:251344

ORIGINAL REFERENCE NO.: 121:45799a,45802a

TITLE: The effect of plant growth regulators on the production of canthin-6-one alkaloids by Brucea javanica cell suspension cultures

AUTHOR(S): Liu, Karin C. S.; Roberts, Margaret F.; Homeyer, B. Curt; Yang, Shi Lin; Phillipson, J. David

CORPORATE SOURCE: Coll. Med., Natl. Taiwan Univ., Taipei, 10018, Taiwan

SOURCE: Phytochemistry (1994), 37(2), 421-4

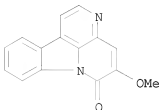
CODEN: PYTCAS; ISSN: 0031-9422

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Cell suspension cultures of Brucea javanica were grown in media with a variety of plant growth regulators. Although quassinoid production could not be initiated, high yields of canthin-6-one alkaloids were found. The plant growth regulator regimes used, IAA + KIN, 2,4-D + KIN, NAA + KIN, NAA + BAP, 2,4-D + BAP and IAA + BAP affected cell growth and overall alkaloid production. Variations in the yields of the individual alkaloids were also observed. The most efficient production of canthin-6-one, 11-hydroxycanthin-6-one, 11-methoxycanthin-6-one and

5-methoxycanthin-6-one was found in media containing NAA + BAP.
 IT 15071-56-4, 5-Methoxycanthin-6-one
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (effect of plant growth regulators on production of canthin-6-one alkaloids by *Brucea javanica* cell suspension cultures)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



L4 ANSWER 40 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN

ACCESSION NUMBER: 1994:621589 CAPLUS

DOCUMENT NUMBER: 121:221589

ORIGINAL REFERENCE NO.: 121:40089a, 40092a

TITLE: Gastric antiulcer components from the woods of

Picrasma quassioides (Simaroubaceae)

Niiho, Yujiro; Mitsunaga, Katsuyoshi; Koike, Kazuo;

Ohmoto, Taichi

CORPORATE SOURCE: Tsukuba Research Institute, Ohta's Isan Co. Ltd.,

Ibaraki, 300-12, Japan

SOURCE: Natural Medicines (Tokyo, Japan) (1994), 48(2), 116-21

CODEN: NMEDEO; ISSN: 1340-3443

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB Various fractions of *Picrasma quassioides* Bennett were assayed for their antigastric ulcer activity in rats. A MeOH extract of the wood prevented the secretion of gastric juice in a dose dependent manner. The MeOH extract also showed the same effects on rats having aspirin-induced gastric ulcer. Then, the MeOH extract was further extracted with CHCl₃ and EtOAc. The protective effects were detected in the CHCl₃-soluble fraction and their effective components were identified as nigakinone and methylnigakinone. The CHCl₃-insol. fraction, especially the EtOAc-soluble fraction, showed a protective effect on the mucous membrane. We also examined the effects of quassinoids of the *Picrasma* genus on the aspirin-induced ulcer in rats.

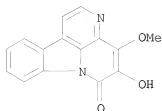
IT 18110-86-6, Nigakinone 18110-87-7, Methylnigakinone

RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)

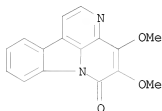
(gastric antiulcer components from *Picrasma quassioides* wood)

RN 18110-86-6 CAPLUS

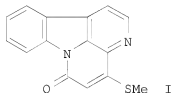
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



RN 18110-87-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)

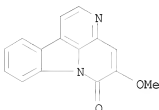


L4 ANSWER 41 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1994:575195 CAPLUS
 DOCUMENT NUMBER: 121:175195
 ORIGINAL REFERENCE NO.: 121:31715a,31718a
 TITLE: 13C NMR and other spectral data of
 4-methylthiocanthin-6-one from *Quassia africana*
 Ayafor, J. Foyere; Tchuendem, Marguerite K.; Mbazoa,
 Celine M.; Ngadjui, Bonaventure T.; Tillequin,
 Francois
 AUTHOR(S): Fac. Sci., Univ. Yaounde, Yaounde, Cameroon
 CORPORATE SOURCE: Bulletin of the Chemical Society of Ethiopia (1993),
 SOURCE: 7(2), 121-4
 CODEN: BCETE6; ISSN: 1011-3924
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI

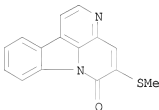


AB The rare alkaloid 4-methylthiocanthin-6-one (I) was isolated from the root bark of *Q. africana* together with 5-methoxycanthin-6-one. The MS, ¹H NMR and ¹³C NMR data for 4-methylthiocanthin-6-one are reported herein for the 1st time. In particular, unambiguous assignment of the ¹³C NMR chemical shifts have been made using 1D and 2D NMR expts.

IT 15071-56-4, 5-Methoxycanthin-6-one
 RL: BIOL (Biological study)
 (from *Quassia africana*)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



IT 157770-30-4
 RL: BIOL (Biological study)
 (from *Quassia africana*, isolation and structure of)
 RN 157770-30-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(methylthio)- (CA INDEX NAME)



L4 ANSWER 42 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1994:478270 CAPLUS

DOCUMENT NUMBER: 121:78270

ORIGINAL REFERENCE NO.: 121:13959a,13962a

TITLE: Antiparasitic compounds from East African plants:
 Isolation and biological activity of anonaine,
 matricarianol, canthin-6-one and caryophyllene oxide.
 AUTHOR(S): Bettarini, F.; Borgonovi, G. E.; Fiorani, T.;
 Gagliardi, I.; Caprioli, V.; Massardo, P.; Ogoche, J.
 I. J.; Hassanali, A.; Nyandat, E.; Chapya, A.
 CORPORATE SOURCE: Ist. Guido Donegani S.p.A., Enimont Group, Novara,
 28100, Italy

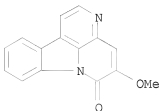
SOURCE: Insect Science and Its Application (1993), 14(1), 93-9
 CODEN: ISIADL; ISSN: 0191-9040

DOCUMENT TYPE: Journal

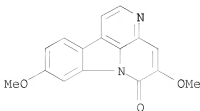
LANGUAGE: English

AB Five natural compds. possessing antiparasitic activity were isolated from East African plants and tested, together with some semisynthetic derivs., against microorganisms and arthropods of agricultural interest. Anonaine, from *Annona squamosa*, canthin-6-one and 5-methoxycanthin-6-one, from *Fagaropsis angolensis*, showed fungicidal activity. E,Z-matricarianol, from *Hoehnelia vernonioides* was fungicidal, insecticidal and acaricidal. Caryophyllene oxide, from *Uvaria*, was insecticidal and antifeedant. Canthin-6-one and its dihydro derivative were the most effective antimicrobial

comps. tested.
 IT 15071-56-4, 5-Methoxycanthin-6-one
 RL: BIOL (Biological study)
 (from *Fagaropsis angolensis*, as fungicide)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)

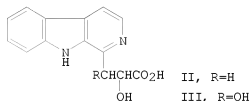
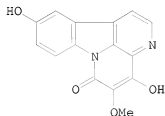


L4 ANSWER 43 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1994:431134 CAPLUS
 DOCUMENT NUMBER: 121:31134
 ORIGINAL REFERENCE NO.: 121:5673a,5676a
 TITLE: Canthin-6-one alkaloids from *Eurycoma longifolia*
 AUTHOR(S): Mitsunaga, Katsuyoshi; Koike, Kazuo; Tanaka, Tomoko;
 Ohkawa, Youko; Kobayashi, Yuko; Sawaguchi, Takako;
 Ohmoto, Taichi
 CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Funabashi, 274, Japan
 SOURCE: Phytochemistry (1994), 35(3), 799-802
 CODEN: PYTCAS; ISSN: 0031-9422
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Five new canthin-6-one alkaloids, 9,10-dimethoxycanthin-6-one,
 10-hydroxy-9-methoxycanthin-6-one, 11-hydroxy-10-methoxycanthin-6-one,
 5,9-dimethoxycanthin-6-one and 9-methoxy-3-methylcanthin-5,6-dione, were
 isolated from the bark and wood of *E. longifolia*, along with six known
 canthin-6-one alkaloids and two known β -carboline alkaloids. Their
 structures were determined from spectroscopic data and other chemical evidence.
 IT 155861-54-4
 RL: BIOL (Biological study)
 (from *Eurycoma longifolia*, structure of)
 RN 155861-54-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5,9-dimethoxy- (CA INDEX NAME)

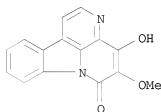


L4 ANSWER 44 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1994:405068 CAPLUS
 DOCUMENT NUMBER: 121:5068

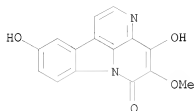
ORIGINAL REFERENCE NO.: 121:1119a,1122a
 TITLE: New alkaloids, picrasidines W, X and Y, from *Picrasma quassioides* and x-ray crystallographic analysis of picrasidine Q
 AUTHOR(S): Li, Hong Yu; Koike, Kazuo; Ohmoto, Taichi
 CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Funabashi, 274, Japan
 SOURCE: Chemical & Pharmaceutical Bulletin (1993), 41(10), 1807-11
 CODEN: CPBTAL; ISSN: 0009-2363
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



AB Three new alkaloids, picrasidines W (I), X (II) and Y (III), were isolated from the wood of *Picrasma quassioides* Bennet (Simaroubaceae). Their structures were determined by spectral and chemical evidence. Previously isolated
 IT picrasidine Q (4) was unambiguously determined by x-ray crystallog. anal.
 IT 101219-61-8, Picrasidine Q
 RL: PROC (Process)
 RN (X-ray crystallog. anal. of, from *Picrasma quassioides*)
 RN 101219-61-8 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-hydroxy-5-methoxy- (CA INDEX NAME)



IT 155416-28-7
 RL: PROC (Process)
 (structure and isolation of, from *Picrasma quassioides* wood)
 RN 155416-28-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,10-dihydroxy-5-methoxy- (CA INDEX NAME)



L4 ANSWER 45 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN

ACCESSION NUMBER: 1994:101909 CAPLUS

DOCUMENT NUMBER: 120:101909

ORIGINAL REFERENCE NO.: 120:17931a,17934a

TITLE: A novel canthin-6-one alkalid isolated from cell suspension cultures of *Brucea javanica* (L.) merr. Chen, Karin Chiung Sheue; Chang, Hui Li; Chan, Mei Ling; Lee, Shoei Sheng

AUTHOR(S): Sch. Pharm., Natl. Taiwan Univ., Taipei, 100, Taiwan

CORPORATE SOURCE: Journal of the Chinese Chemical Society (Taipei, Taiwan) (1993), 40(4), 403-5

SOURCE: CODEN: JCCTAC; ISSN: 0009-4536

DOCUMENT TYPE: Journal

LANGUAGE: English

AB From cell suspension cultures of *Brucea javanica*, the canthin-6-one alkaloid 5,11-dimethoxycanthin-6-one was isolated. The structural

determination is based on spectral anal. Five other alkaloids, canthin-6-one-3-N-oxide, 11-hydroxycanthin-6-one, canthin-6-one, 5-methoxycanthin-6-one, and 11-methoxycanthin-6-one, were also identified.

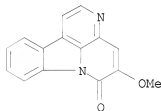
IT 15071-56-4 101219-61-8

RL: BIOL (Biological study)

(from *Brucea javanica* cell suspension cultures)

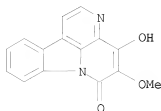
RN 15071-56-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)

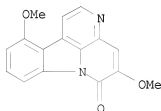


RN 101219-61-8 CAPLUS

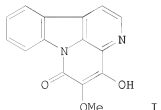
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-hydroxy-5-methoxy- (CA INDEX NAME)



IT 152592-77-3
 RL: BIOL (Biological study)
 (from *Brucea javanica* cell suspension cultures, isolation and structure
 of)
 RN 152592-77-3 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5,11-dimethoxy- (CA INDEX
 NAME)



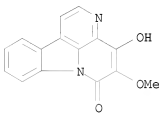
L4 ANSWER 46 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1992:588225 CAPLUS
 DOCUMENT NUMBER: 117:188225
 ORIGINAL REFERENCE NO.: 117:32409a,32412a
 TITLE: Isolation of 4-hydroxy-5-methoxycanthin-6-one from
Picrasma quassioides and revision of a previously
 reported structure
 AUTHOR(S): Liu, Jian; Davidson, Stephen R.; Van der Heijden,
 Robert; Verpoorte, Robert; Howarth, Oliver W.
 CORPORATE SOURCE: Chem. Lab., Univ. Kent, Canterbury/Kent, CT2 7NH, UK
 SOURCE: Liebigs Annalen der Chemie (1992), (9), 987-8
 CODEN: LACHDL; ISSN: 0170-2041
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



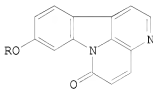
AB A new alkaloid, 4-hydroxy-5-methoxycanthin-6-one (I), was isolated from

Picrasma quassioides (Simaroubaceae), and its structure has been determined by high-field ^1H - and ^{13}C -NMR, $^{13}\text{C}, ^1\text{H}$ -HETCOR, $^1\text{H}, ^1\text{H}$ -2D-COSY, and NOE-difference spectra. Previous data, interpreted by other workers as being from this compound, is instead tentatively reassigned to another new alkaloid structure, 4-hydroxy-3-methylcanthine-5,6-dione.

IT 101219-61-8
 RL: BIOL (Biological study)
 (from *Picrasma quassioides*, structure of)
 RN 101219-61-8 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-hydroxy-5-methoxy- (CA INDEX NAME)



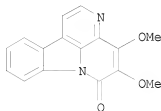
L4 ANSWER 47 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1992:528185 CAPLUS
 DOCUMENT NUMBER: 117:128185
 ORIGINAL REFERENCE NO.: 117:22181a, 22184a
 TITLE: Canthin-6-one alkaloids from *Picrolemma granatensis*
 AUTHOR(S): Rodrigues Fo., Edson; Fernandes, Joao B.; Vieira, Paulo C.; Da Silva, M. Fatima das G. F.
 CORPORATE SOURCE: Dep. Quim., Univ. Fed. Sao Carlos, Sao Carlos, 13560, Brazil
 SOURCE: Phytochemistry (1992), 31(7), 2499-501
 CODEN: PYTCAS; ISSN: 0031-9422
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



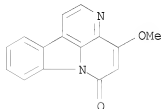
I, R=Me
 II, R=H

AB From the branches of *Picrolemma granatensis*, besides scopoletin, the known canthin-6-one alkaloids 9-methoxycanthin-6-one (I), 9-hydroxycanthin-6-one (II), 4,5-dimethoxycanthin-6-one and the two new 8-hydroxy-9-methoxycanthin-6-one and 9-methoxycanthin-6-one 3-N-oxide were identified by full spectral anal. The placement of a substituent at C-9 was established by NOE expts.
 IT 18110-87-7, 4,5-Dimethoxycanthin-6-one
 RL: BIOL (Biological study)
 (of *Picrolemma granatensis*)

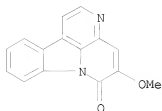
RN 18110-87-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



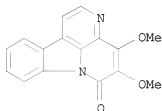
L4 ANSWER 48 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1991:457276 CAPLUS
 DOCUMENT NUMBER: 115:57276
 ORIGINAL REFERENCE NO.: 115:9777a,9780a
 TITLE: Analysis and distribution of alkaloids in *Picrasma quassioides*
 AUTHOR(S): Kohda, Kuniko; Koike, Kazuo; Ohmoto, Taichi; Tanaka, Osamu; Itou, Hiroshi
 CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Funabashi, 274, Japan
 SOURCE: Shoyakugaku Zasshi (1990), 44(4), 298-303
 CODEN: SHZAA; ISSN: 0037-4377
 DOCUMENT TYPE: Journal
 LANGUAGE: Japanese
 AB A HPLC method was developed for the simultaneous and quant. anal. of eleven β -carboline and canthinone alkaloids in *P. quassioides*. The method is characterized by the simultaneous presentation of the alkaloid profile. The HPLC was carried out by using a Capcell Pak ODS column with methanol-water (55:45), 0.01M disodium hydrogenphosphate and methanol-water (4:6), and 0.01M disodium hydrogenphosphate as the mobile phases with detection at 254 nm. The quantities of the alkaloids in the bark and wood of *P. quassioides* of Japan and Bhutan were determined by the method.
 IT 5023-08-5 15071-56-4 18110-87-7
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of, in *Picrasma quassioides* bark and wood, by HPLC)
 RN 5023-08-5 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-methoxy- (CA INDEX NAME)



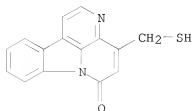
RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



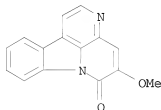
RN 18110-87-7 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



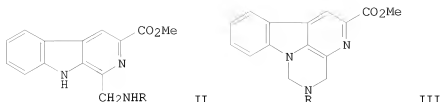
L4 ANSWER 49 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1991:446065 CAPLUS
DOCUMENT NUMBER: 115:46065
ORIGINAL REFERENCE NO.: 115:7933a,7936a
TITLE: 8-Prenylcoumarins: typical secondary metabolites of the Rutaceae from *Pentaceras australis*
AUTHOR(S): Quader, Abdul; Gray, Alexander I.; Hartley, Thomas G.; Waterman, Peter G.
CORPORATE SOURCE: Dep. Pharm., Univ. Strathclyde, Glasgow, G1 1XW, UK
SOURCE: Biochemical Systematics and Ecology (1991), 19(1), 91
CODEN: BSECBU; ISSN: 0305-1978
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The 8-prenylcoumarins osthol and ramosin, the pyranocoumarin seselin as well as canthin-6-one and 4-thiomethylcanthin-6-one were isolated from *P. australis*. The taxonomic significance of these findings is discussed.
IT 134984-19-3
RL: BIOL (Biological study)
(of *Pentaceras australis*)
RN 134984-19-3 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-(mercaptomethyl)- (CA INDEX NAME)



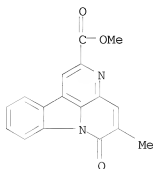
L4 ANSWER 50 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1991:98327 CAPLUS
 DOCUMENT NUMBER: 114:98327
 ORIGINAL REFERENCE NO.: 114:16687a,16690a
 TITLE: Production of canthin-6-one alkaloids by cell suspension cultures of *Brucea javanica* (L.) Merr
 AUTHOR(S): Liu, Karin C. S.; Yang, Shi Lin; Roberts, Margaret F.; Phillipson, J. David
 CORPORATE SOURCE: Sch. Pharm., Univ. London, London, WC1N 1AX, UK
 SOURCE: Plant Cell Reports (1990), 9(5), 261-3
 CODEN: PCRPD8; ISSN: 0721-7714
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Cell suspension cultures of *B. javanica* were used to determine culture growth characteristics and production of canthin-6-one alkaloids. The major alkaloids produced were canthin-6-one, 11-hydroxycanthin-6-one, 5-methoxycanthin-6-one and 11-methoxycanthin-6-one. Alkaloids were synthesized throughout the 36 day growth cycle of the cells with maximum amts. within the cell occurring between days 20 to 28; approx. 10% of the alkaloids were in the medium at day 24 rising to 45% at day 32.
 IT 15071-56-4, 5-Methoxycanthin-6-one
 RL: FORM (Formation, nonpreparative)
 (formation of, by cell suspension cultures of *Brucea javanica*)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



L4 ANSWER 51 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1990:552300 CAPLUS
 DOCUMENT NUMBER: 113:152300
 ORIGINAL REFERENCE NO.: 113:25891a
 TITLE: New tetracyclic compounds containing the β -carboline moiety
 AUTHOR(S): Del Giudice, Maria Rosaria; Gatta, Franco; Settimj, Guido
 CORPORATE SOURCE: Lab. Chim. Farm., Ist. Super. Sanita, Rome, 00161, Italy
 SOURCE: Journal of Heterocyclic Chemistry (1990), 27(4), 967-73
 CODEN: JHTCAD; ISSN: 0022-152X
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 113:152300
 GI

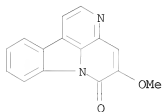


- AB Oxidation of 1-methyl-3-methoxycarbonyl- β -carboline with SeO_2 gave 1-formyl-3-methoxycarbonyl- β -carboline (I), which reacted with acetic or propionic anhydride to give the 2-methoxycarbonyl-6H-indolo[3,2,1-d,e][1,5]naphthyridin-6-ones; reaction of I with some primary amines led to the formation of the Schiff bases, which were reduced to the 1-aminomethyl-3-methoxycarbonyl- β -carbolines II (R = Me, Et, Bu, CH_2Ph , $\text{CH}_2\text{CH}_2\text{Ph}$, $\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$, $\text{CH}_2\text{CH}_2\text{NEt}_2$) with NaBH_4 . Cyclization of II with aqueous formaldehyde led to the pyrimido[3,4,5-lm]pyrido[3,4-b]indoles III. Analogously, cyclization with formaldehyde, acetone, or 1,1'-carbonyldiimidazole of the 3-aminomethyl-1,2,3,4-tetrahydro- β -carbolines, obtained by reaction of 3-methoxycarbonyl-1,2,3,4-tetrahydro- β -carboline with amines followed by lithium aluminum hydride reduction of the resulting amides, gave the imidazo[1',5'-1,6]pyrido[3,4-b]indoles. Dieckmann cyclization of 3-methoxycarbonyl-2[(3-ethoxycarbonyl)-1-propyl]-1,2,3,4-tetrahydro- β -carboline led to a 1:1 mixture of the β -ketoesters, which underwent deethoxycarbonylation to 5,6,8,9,10,11,11a,12-octahydroindolo[3,2-b]quinolizin-11-one. Finally, the polyphosphoric acid (or esters) catalyzed cyclization of the N-acyl derivs. of 3-hydrazinocarbonyl- β -carboline led smoothly to the 3-(1,3,4-oxadiazol-2-yl)- β -carbolines.
- IT 129609-51-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
- RN 129609-51-4 CAPLUS
- CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-2-carboxylic acid, 5-methyl-6-oxo-, methyl ester (CA INDEX NAME)

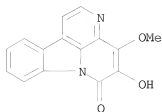


L4 ANSWER 52 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1990:548877 CAPLUS
 DOCUMENT NUMBER: 113:148877
 ORIGINAL REFERENCE NO.: 113:25225a,25228a
 TITLE: Canthin-6-one alkaloids from *Pierreodendron africanum*

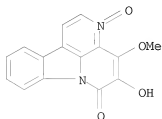
stem barks
 AUTHOR(S): Vanhaelen-Fastre, R.; Vanhaelen, M.; Diallo, B.; Breyne, H.
 CORPORATE SOURCE: Inst. Pharm., Univ. Libre Bruxelles, Brussels, B-1050, Belg.
 SOURCE: Planta Medica (1990), 56(2), 241-2
 CODEN: PLMEAA; ISSN: 0032-0943
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB From *P. africanum*, 5 alkaloids were isolated: canthin-6-one, 5-methoxycanthin-6-one, 11-hydroxycanthin-6-one, 3-methoxycanthin-2,6-dione and canthin-2,6-dione.
 IT 15071-56-4, 5-Methoxycanthin-6-one
 RL: BIOL (Biological study)
 (from *Pierreodendron africanum* stem bark)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



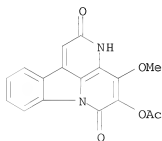
L4 ANSWER 53 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1990:548876 CAPLUS
 DOCUMENT NUMBER: 113:148876
 ORIGINAL REFERENCE NO.: 113:25225a,25228a
 TITLE: New canthin-6-one alkaloids from *Quassia amara*
 AUTHOR(S): Barbetti, P.; Grandolini, G.; Fardella, G.; Chiappini, I.; Mastalia, A.
 CORPORATE SOURCE: Ist. Chim. Farm. Tec. Farm., Univ. Perugia, Perugia, I-06100, Italy
 SOURCE: Planta Medica (1990), 56(2), 216-17
 CODEN: PLMEAA; ISSN: 0032-0943
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB From the wood of *Q. amara* (Simarubaceae), two new canthin-6-one alkaloids have been isolated and their structures determined as 3-methyl-4-methoxy-5-hydroxycanthin-2,6-dione and 4-methoxy-5-hydroxycanthin-6-one 3-N-oxide by spectroscopic and chemical methods. 3-Methylcanthin-5,6-dione has been also isolated and identified for the first time from this source.
 IT 18110-86-6, 4-Methoxy-5-hydroxycanthin-6-one
 RL: BIOL (Biological study)
 (from *Quassia amara*)
 RN 18110-86-6 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



IT 129722-98-1
 RL: BIOL (Biological study)
 (from Quassia amara, isolation and structure of)
 RN 129722-98-1 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy-, 3-oxide
 (CA INDEX NAME)



IT 129724-31-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 129724-31-8 CAPLUS
 CN 3H-Indolo[3,2,1-de][1,5]naphthyridine-2,6-dione, 5-(acetyloxy)-4-methoxy-
 (CA INDEX NAME)

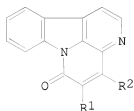


L4 ANSWER 54 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1990:538493 CAPLUS
 DOCUMENT NUMBER: 113:138493
 ORIGINAL REFERENCE NO.: 113:23417a, 23420a
 TITLE: Antiulcer alkaloids from Picrasma ailanthoids
 INVENTOR(S): Omoto, Taichi; Shinho, Yujiro; Nakajima, Kajiro;
 Ishiwatari, Hiroe; Ito, Hiroshi
 PATENT ASSIGNEE(S): Ohta's Isan Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02004790	A	19900109	JP 1988-155940	19880623
JP 06096531	B	19941130		
PRIORITY APPLN. INFO.:			JP 1988-155940	19880623
OTHER SOURCE(S):	MARPAT 113:138493			

GI



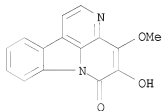
AB The nigakinone alkaloids (I; R1, R2 = OH or MeO) are the antiulcer principles of *P. ailanthoides* or *Ailanthus altissima*. The oral dosage forms (powders, tablets, emulsions, etc.) and injections containing nigakinone derivs. can be prepared by extraction and purification by column chromatog. from the plants. Thus, tablets, granules, and injections containing nigakinone were prepared, and their antiulcer effects were tested in rats, with good inhibitory action on gastric acid and pepsin secretions.

IT 18110-86-6P, Nigakinone 18110-87-7P, Methylnigakinone 18110-89-9P, Nornigakinone

RL: PREP (Preparation)
 (of *Picrasina ailanthoides*, dosage preparation and antiulcer effect of)

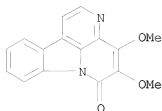
RN 18110-86-6 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)

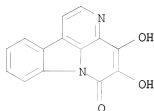


RN 18110-87-7 CAPLUS

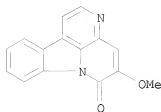
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



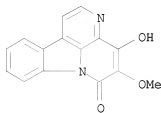
RN 18110-89-9 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dihydroxy- (CA INDEX NAME)



L4 ANSWER 55 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1990:155240 CAPLUS
 DOCUMENT NUMBER: 112:155240
 ORIGINAL REFERENCE NO.: 112:26162h,26163a
 TITLE: Canthin-6-one alkaloids from cell suspension cultures of *Bucea javanica*
 AUTHOR(S): Liu, Karin Chiung Sheue; Yang, Shi Lin; Roberts, Margaret F.; Phillipson, J. David
 CORPORATE SOURCE: Sch. Pharm., Univ. London, London, WC1N 1AX, UK
 SOURCE: Phytochemistry (1990), 29(1), 141-3
 CODEN: PYTCAS; ISSN: 0031-9422
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Canthin-6-one, 11-hydroxycanthin-6-one, 11-methoxycanthin-6-one, 5-methoxycanthin-6-one, 4-hydroxy-5-methoxycanthin-6-one and canthin-6-one-3N-oxide were isolated from cell suspension cultures of *B. javanica*. The total yield of alkaloid produced in the cells and the medium is >2.0 mg/g dry weight of cells.
 IT 15071-56-4, 5-Methoxycanthin-6-one 101219-61-8
 RL: BIOL (Biological study)
 (from *Bucea javanica* cell suspension cultures)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



RN 101219-61-8 CAPLUS
 CN 6H-indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-hydroxy-5-methoxy- (CA INDEX NAME)



L4 ANSWER 56 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1989:219162 CAPLUS

DOCUMENT NUMBER: 110:219162

ORIGINAL REFERENCE NO.: 110:36279a,36282a

TITLE: Determination of alkaloids in *Picrasma quassioides* (D. Don) Benn

AUTHOR(S): Luo, S. R.; Guo, R.; Yang, J. S.

CORPORATE SOURCE: Inst. Mater. Med., Chin. Acad. Med. Sci., Beijing, Peop. Rep. China

SOURCE: Yaoxue Xuebao (1988), 23(12), 906-9

CODEN: YHHPAL; ISSN: 0513-4870

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB A simple, sensitive, and accurate method is described for separation and determination

of 4 alkaloids, 1-formyl- β -carboline, 4,5-dimethoxycanthin-6-one, 1-vinyl-4,8-dimethoxy- β -carboline, and 1-formyl-4-methoxy- β -carboline in *Kumu* (*P. quassioides*). A sample solution was applied at a point 1 cm from the bottom edge of the HPTLC silica gel plate (10 \times 10 cm). CHCl_3 (H_2O saturated)-MeOH (40:0.5) was used as the developing solvent. The plate was saturated for 30 min and then developed twice for 9 cm using the ascending technique. The plate was fumigated with formic acid for 1 h at room temperature to intensify the spot color. The spots were scanned with a Shimadzu CS-910 TLC scanner. The content of 4 alkaloids in *Ku-Mu* was calculated by comparison with stds. spotted on the same plate. The standard curve was linear in the range of 0.05-0.30 μg for the 4 alkaloids. The method was applied to the anal. of different samples. This method can be used for the quality control of *Kumu* preps. for clin. use.

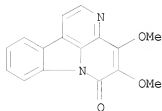
IT 18110-87-7, 4,5-Dimethoxycanthin-6-one

RL: ANT (Analyte); ANST (Analytical study)

(determination of, in *Kumu* (*Picrasma quassioides*) by high-performance TLC)

RN 18110-87-7 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



L4 ANSWER 57 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1989:169068 CAPLUS

DOCUMENT NUMBER: 110:169068

ORIGINAL REFERENCE NO.: 110:27937a,27940a

TITLE: Inhibition of cyclic AMP phosphodiesterase in medicinal plants. Part XV. Inhibition of adenosine 3',5'-cyclic monophosphate phosphodiesterase by alkaloids. II

AUTHOR(S): Ohmoto, Taichi; Nikaido, Tamotsu; Koike, Kazuo; Kohda, Kuniko; Sankawa, Ushio

CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Chiba, 274, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1988), 36(11), 4588-92

CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The structure-activity relationships were studied for analogous alkaloids from *Picrasma quassioides* and *Ailanthus altissima* and their derivs. as inhibitors of cAMP phosphodiesterase. Altogether, 53 β -carboline, 18 canthinone, and 7 dimeric alkaloids were tested for cAMP phosphodiesterase inhibition. Major alkaloids among the 3 groups of congeners in *P. quassioides* and *Al. altissima* showed the most potent inhibitory activity, equal to or greater than that of papaverine used as a reference

IT 15071-56-4 18110-86-6 18110-87-7

18211-86-4 64118-73-6 89915-37-7

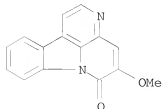
101219-61-8

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(cAMP phosphodiesterase inhibition by, structure in relation to)

RN 15071-56-4 CAPLUS

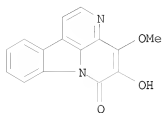
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



RN 18110-86-6 CAPLUS

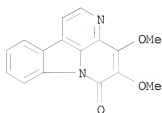
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA

INDEX NAME)



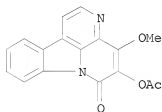
RN 18110-87-7 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



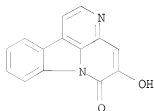
RN 18211-86-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(acetyloxy)-4-methoxy- (CA INDEX NAME)



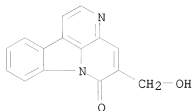
RN 64118-73-6 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy- (CA INDEX NAME)

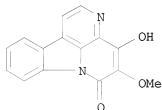


RN 89915-37-7 CAPLUS

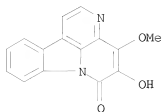
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(hydroxymethyl)- (CA INDEX NAME)



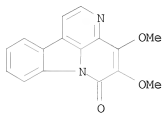
RN 101219-61-8 CAPLUS
 CN 6H-indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-hydroxy-5-methoxy- (CA INDEX NAME)



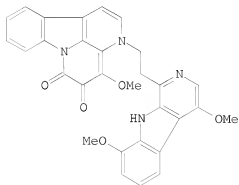
L4 ANSWER 58 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1989:111567 CAPLUS
 DOCUMENT NUMBER: 110:111567
 ORIGINAL REFERENCE NO.: 110:18351a,18354a
 TITLE: Antiherpes activity of Simaroubaceae alkaloids in vitro
 AUTHOR(S): Ohmoto, Taichi; Koike, Kazuo
 CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Funabashi, 274, Japan
 SOURCE: Shoyakugaku Zasshi (1988), 42(2), 160-2
 CODEN: SHZAA; ISSN: 0037-4377
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The antiherpes activity of the alkaloids from *Picrasma quassioides* and *Ailanthus altissima* was investigated in vitro. The β -carboline alkaloids tested had an activity against herpes simplex virus.
 IT 18110-86-6 18110-87-7
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (virucidal activity of, against herpes simplex virus)
 RN 18110-86-6 CAPLUS
 CN 6H-indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



RN 18110-87-7 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



L4 ANSWER 59 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1989:72469 CAPLUS
DOCUMENT NUMBER: 110:72469
ORIGINAL REFERENCE NO.: 110:11903a,11906a
TITLE: The alkaloids of *Picrasma quassioides*. Part 11.
Picrasidine U, dimeric alkaloid from *Picrasma quassioides*
AUTHOR(S): Koike, Kazuo; Ohmoto, Taichi
CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Chiba, 274, Japan
SOURCE: Phytochemistry (1988), 27(9), 3029-30
CODEN: PYTCAS; ISSN: 0031-9422
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

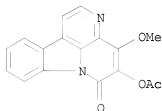


AB A new canthin-5,6-dione and β -carboline dimeric alkaloid, picrasidine U (I), was isolated from the root wood of *P. quassioides*. The structure was determined by spectral anal. and chemical evidence.

IT 18211-86-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 18211-86-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(acetyloxy)-4-methoxy- (CA INDEX NAME)



L4 ANSWER 60 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1988:52835 CAPLUS

DOCUMENT NUMBER: 108:52835

ORIGINAL REFERENCE NO.: 108:8765a,8768a

TITLE: A new neoquassin derivative from *Quassia amara*

AUTHOR(S): Grandolini, G.; Casinovi, C. G.; Barbetti, P.; Fardella, G.

CORPORATE SOURCE: Ist. Chim. Farm. Tec. Farm., Univ. Perugia, Perugia, Italy

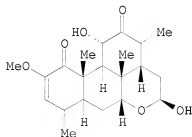
SOURCE: *Phytochemistry* (1987), 26(11), 3085-7

CODEN: PYTCAS; ISSN: 0031-9422

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



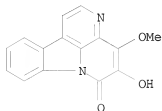
I

AB A new quassinoid, 11-dihydro-12-norneoquassin (I), was isolated from *Q. amara* wood and its structure determined by chemical and spectral means.

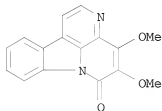
Quassin, neoquassin, paraine, and isoparaine were also isolated, in addition to 4-methoxy-5-hydroxycanthin-6-one, which was isolated for the first time from *Quassia*.

10/535,430

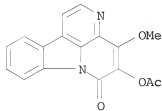
IT 18110-86-6
RL: BIOL (Biological study)
(from *Quassia amara*)
RN 18110-86-6 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



IT 18110-87-7P 18211-86-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 18110-87-7 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)

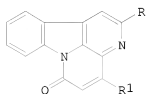


RN 18211-86-4 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(acetyloxy)-4-methoxy- (CA INDEX NAME)

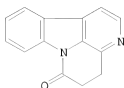


L4 ANSWER 61 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1987:455704 CAPLUS
DOCUMENT NUMBER: 107:55704
ORIGINAL REFERENCE NO.: 107:9203a,9206a
TITLE: Occurrence of indole alkaloids in *Ailanthus altissima* cell cultures
AUTHOR(S): Crespi-Perellino, N.; Guicciardi, A.; Malyszko, G.; Arlandini, E.; Ballabio, M.; Minghetti, A.

CORPORATE SOURCE: Ric. Sviluppo Microbiol. Ind., Farmitalia Carlo Erba, Milan, 20146, Italy
 SOURCE: Journal of Natural Products (1986), 49(6), 1010-14
 CODEN: JNPRDF; ISSN: 0163-3864
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI

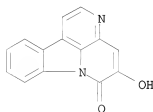


I, R=OH, R¹=H
 II, R=H, R¹=OH

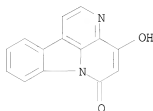


III

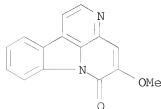
AB Production of alkaloids with both canthin-6-one and β -carboline structure by *A. altissima* cell cultures is reported. Besides canthin-6-one, 1-methoxycanthin-6-one, canthin-6-one-3-oxide, 1-methoxycanthin-6-one-3-oxide, 1-hydroxycanthin-6-one, 5-hydroxycanthin-6-one, β -carboline-1-propionic acid, and 4-methoxy- β -carboline-1-carboxylic acid methyl ester, three new alkaloids are described. These are 2-hydroxycanthin-6-one (I), 4-hydroxycanthin-6-one (II), and 4,5-dihydrocanthin-6-one (III).
 IT 64118-73-6, 5-Hydroxycanthin-6-one
 RL: BIOL (Biological study)
 (of *Ailanthus altissima* cell culture)
 RN 64118-73-6 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy- (CA INDEX NAME)



IT 106941-27-9, 4-Hydroxycanthin-6-one
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (of *Ailanthus altissima* cell culture, isolation and structure of)
 RN 106941-27-9 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-hydroxy- (CA INDEX NAME)



L4 ANSWER 62 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN
 ACCESSION NUMBER: 1987:451392 CAPLUS
 DOCUMENT NUMBER: 107:51392
 ORIGINAL REFERENCE NO.: 107:8367a,8370a
 TITLE: Antitumor agents: LXXXXVII. Cytotoxic antileukemic canthin-6-one alkaloids from Brucea antidysenterica and the structure activity relationships of their related derivatives
 AUTHOR(S): Fukamiya, Narihiko; Okano, Masayoshi; Aratani, Takaaki; Negoro, Kenji; Lin, Yuh Meei; Lee, Kuo Hsiung
 CORPORATE SOURCE: Fac. Integr. Arts Sci., Hiroshima Univ., Hiroshima, 730, Japan
 SOURCE: Planta Medica (1987), 53(2), 140-3
 CODEN: PLMEAA; ISSN: 0032-0943
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Two cytotoxic antileukemic alkaloids, 11-hydroxy-1-methoxycanthin-6-one and 1-hydroxy-11-methoxycanthin-6-one, as well as 1-methoxycanthin-6-one were isolated from *B. antidysenterica*. The Me ether and a series of esters of 11-hydroxycanthin-6-one were prepared for investigating the structure-activity relationships. 1,11-Dimethoxycanthin-6-one and 11-hydroxycanthin-6-one had the most potent cytotoxic activity. Hydroxy and(or) methoxy substitutions at C-10 or C-11 of canthin-6-one alkaloids are structural requirement for the potent cytotoxicity. Similar substitution at C-1 had no significant effect upon cytotoxicity.
 IT 15071-56-4
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (isolation and antileukemic activity of, from *Brucea antidysenterica*)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



L4 ANSWER 63 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN
 ACCESSION NUMBER: 1987:99460 CAPLUS
 DOCUMENT NUMBER: 106:99460
 ORIGINAL REFERENCE NO.: 106:16233a,16236a

TITLE: Biosynthetic relationship between indole alkaloids produced by cell cultures of *Ailanthus altissima*

AUTHOR(S): Crespi-Perellino, N.; Guicciardi, A.; Malyszko, G.; Minghetti, A.

CORPORATE SOURCE: Ric. Sviluppo Microbiol. Ind., Farmitalia Carlo Erba, Milan, 20146, Italy

SOURCE: Journal of Natural Products (1986), 49(5), 814-22
CODEN: JNPRDF; ISSN: 0163-3864

DOCUMENT TYPE: Journal

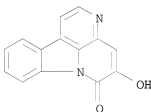
LANGUAGE: English

AB Feeding expts. in which [^{14}C]-tryptophan was administered to cell cultures of *A. altissima* showed that the biosynthetic sequence of the produced alkaloids is as follows: tryptophan \rightarrow β -carboline-1-propionic acid \rightarrow 4,5-dihydrocannabin-6-one (I) \rightarrow cannabin-6-one (II) \rightarrow 1-hydroxycannabin-6-one \rightarrow 1-methoxycannabin-6-one (III) \rightarrow 1-methoxycannabin-6-one-3-oxide. 2-Hydroxycannabin-6-one (IV), 4-hydroxycannabin-6-one (V), and 5-hydroxycannabin-6-one derive from II, but their methoxy derivs. were not detected in the cultures. Cannabin-6-one 3-oxide also derives from II but is not further transformed. [^{14}C]tryptamine was ineffective in labeling the alkaloids. Except for II and I, none of the above alkaloids has ever been described in plant cell cultures, and I, IV, and V have never actually been found in nature.

IT 64118-73-6, 5-Hydroxycannabin-6-one 106941-27-9
RL: FORM (Formation, nonpreparative)
(formation of, in *Ailanthus altissima* cell cultures, biosynthetic pathways in relation to)

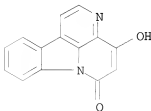
RN 64118-73-6 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy- (CA INDEX NAME)



RN 106941-27-9 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-hydroxy- (CA INDEX NAME)



L4 ANSWER 64 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

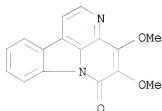
ACCESSION NUMBER: 1987:30064 CAPLUS

DOCUMENT NUMBER: 106:30064

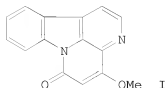
ORIGINAL REFERENCE NO.: 106:5007a

TITLE: Indole alkaloids and quassin from *Quassia africana*

AUTHOR(S): Lumonadio, Luyengi; Vanhaelen, Maurice
 CORPORATE SOURCE: Inst. Pharm., Univ. Libre Bruxelles, Brussels, 1050, Belg.
 SOURCE: Journal of Natural Products (1986), 49(5), 939
 CODEN: JNPRDF; ISSN: 0163-3864
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The root bark of *Q. africana* (syn. *Simaba africana*) contained 3 alkaloids (canthin-6-one, 4,5-dimethoxycanthin-6-one, β -carboline-1-propionic acid) and quassin, an addnl. quassinoid different from those previously isolated from this plant. Their structures were established by spectroscopy and direct comparison with authentic samples.
 IT 18110-87-7P
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)
 RN 18110-87-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



L4 ANSWER 65 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1987:15732 CAPLUS
 DOCUMENT NUMBER: 106:15732
 ORIGINAL REFERENCE NO.: 106:2669a,2672a
 TITLE: The isolation and structure of cordatanine from *Drymaria cordata* (L.) Willd
 AUTHOR(S): Chen, Wensen
 CORPORATE SOURCE: South China Inst. Bot., Acad. Sin., Canton, Peop. Rep. China
 SOURCE: Zhiwu Xuebao (1986), 28(4), 450-2
 CODEN: CHWHAY; ISSN: 0577-7496
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese
 GI



AB Cordatanine (I) was identified from *D. cordatta* with IR, NMR, and mass spectrometry. The plant sample was extracted with 95% EtOH. The concentrated EtOH

solution was extracted with 2% HCl, and the neutralized HCl solution was extracted with

CHCl₃. Silica gel H column chromatog. was used to purify cordatanine.

The elution solvent was CHCl₃-EtOH (20:1). From 10 kg of sample, 162 mg of I was obtained.

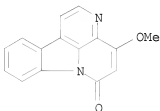
IT 5023-08-5

RL: BIOL (Biological study)

(from *Drymaria cordata*, isolation and structure of)

RN 5023-08-5 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-methoxy- (CA INDEX NAME)



L4 ANSWER 66 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1986:168663 CAPLUS

DOCUMENT NUMBER: 104:168663

ORIGINAL REFERENCE NO.: 104:26727a, 26730a

TITLE: Carbon-13 nuclear magnetic resonance study of canthin-6-one alkaloids

AUTHOR(S): Koike, Kazuo; Ohmoto, Taichi

CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Chiba, 274, Japan

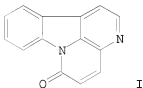
SOURCE: Chemical & Pharmaceutical Bulletin (1985), 33(12), 5239-44

CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

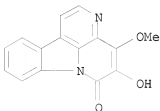
GI



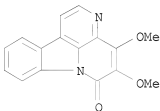
I

AB The ¹³C-NMR spectra of canthin-6-one (I) and 1-methoxycanthin-6-one from *Ailanthus altissima* and 5-hydroxy-4-methoxycanthin-6-one and 4,5--dimethoxycanthin-6-one from *Picrasma quassioides* were measured with the aid of C-proton chemical shift correlations, high-resolution proton-coupled ¹³C spectra, and long-range selective proton decoupling expts. The one-bond C coupling constant (1JCH) values of tertiary C atoms of the 4 compds. except at the C-2 position were within the range of 160-168.7 Hz; however, the 1J(C-2, H) value of 178.6-179.7 Hz was larger than those of other C because of the neighboring N atom. All C resonances of I alkaloids were assigned.

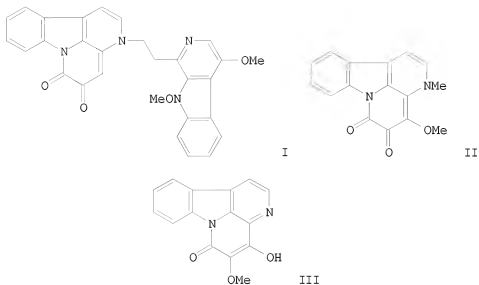
IT 18110-86-6 18110-87-7
RL: PRP (Properties)
(carbon-13 NMR of)
RN 18110-86-6 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA
INDEX NAME)



RN 18110-87-7 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX
NAME)



L4 ANSWER 67 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1986:145469 CAPLUS
DOCUMENT NUMBER: 104:145469
ORIGINAL REFERENCE NO.: 104:22947a,22950a
TITLE: Studies on the alkaloids from *Picrasma quassioides*
Bennet. VI. Structures of picrasidines N, O, and Q
Ohmoto, Taichi; Koike, Kazuo
AUTHOR(S):
CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Funabashi, 274, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1985), 33(11),
4901-5
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



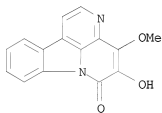
AB Three new alkaloids, picrasidines N (I), O (III) and Q (III), were isolated from the root wood of *P. quassioides* (Simaroubaceae). The structures were determined on the basis of spectral anal. and chemical evidence.

IT 18110-86-6

RL: RCT (Reactant); RACT (Reactant or reagent)
(methylation of)

RN 18110-86-6 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)

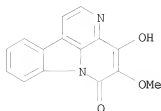


IT 101219-61-8

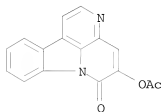
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(of *Picrasma quassioides*, isolation and structure determination of)

RN 101219-61-8 CAPLUS

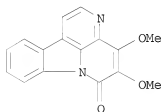
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-hydroxy-5-methoxy- (CA INDEX NAME)



IT 99964-80-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 99964-80-4 CAPLUS
 CN 6H-indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(acetyloxy)- (CA INDEX
 NAME)



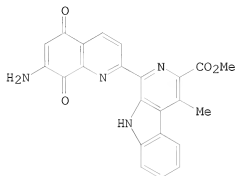
IT 18110-87-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, by methylation of picrasidine O)
 RN 18110-87-7 CAPLUS
 CN 6H-indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX
 NAME)



L4 ANSWER 68 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN
 ACCESSION NUMBER: 1986:109316 CAPLUS
 DOCUMENT NUMBER: 104:109316
 ORIGINAL REFERENCE NO.: 104:17309a,17312a
 TITLE: Total synthesis of lavendamycin methyl ester
 AUTHOR(S): Boger, Dale L.; Duff, Steven R.; Panek, James S.;
 Yasuda, Masami
 CORPORATE SOURCE: Dep. Med. Chem., Univ. Kansas, Lawrence, KS,
 66045-2500, USA
 SOURCE: Journal of Organic Chemistry (1985), 50(26), 5790-5
 CODEN: JOCEAH; ISSN: 0022-3263
 DOCUMENT TYPE: Journal

10/535,430

LANGUAGE: English
OTHER SOURCE(S): CASREACT 104:109316
GI



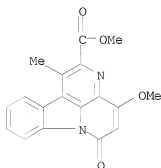
AB A total synthesis of lavendamycin Me ester (I) is based on a Frielander condensation of 2-amino-3-(benzyloxy)-4-bromobenzaldehyde with 1-acetyl-3-(methoxycarbonyl)-4-methyl- β -carboline (II). II was prepared by (Ph₃P)₄Pd-mediated closure of 2-acetyl-3-amino-4-(2-bromophenyl)-6-(methylcarbonyl)-5-methylpyridine which was derived from a regioselective, inverse electron demand [4 + 2] cycloaddn. of 3,5,6-trisethoxycarbonyl-1,2,4-triazine with the pyrrolidine enamine of 2-bromopropiophenone.

IT 99604-79-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 99604-79-2 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-2-carboxylic acid,
4-methoxy-1-methyl-6-oxo-, methyl ester (CA INDEX NAME)



L4 ANSWER 69 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1986:65841 CAPLUS

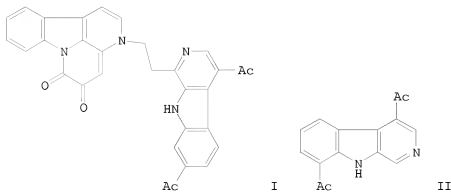
DOCUMENT NUMBER: 104:65841

ORIGINAL REFERENCE NO.: 104:10489a,10492a

TITLE: Studies on the alkaloids from *Picrasma quassioides*
Bennet. V. Structures of picrasidines L, M, and P
Ohmoto, Taichi; Koike, Kazuo

AUTHOR(S):
CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Funabashi, 274, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1985), 33(9),
3847-51
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



AB Two new alkaloids, picrasidines M (I) and P (II), were isolated from the root bark of *P. quassioides*. The structure of picrasidine L was revised from 3-methylcanthin-2,6-dione to 3-methylcanthin-5,6-dione. The structures were determined on the basis of spectral anal. and chemical evidence.

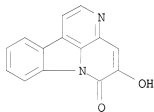
IT 64118-73-6

RL: BIOL (Biological study)

(picrasidine L preparation from)

RN 64118-73-6 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy- (CA INDEX NAME)



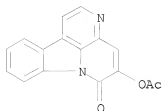
IT 99964-80-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and methylation of)

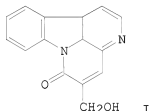
RN 99964-80-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(acetyloxy)- (CA INDEX NAME)

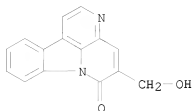


L4 ANSWER 70 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN
 ACCESSION NUMBER: 1986:10576 CAPLUS
 DOCUMENT NUMBER: 104:10576
 ORIGINAL REFERENCE NO.: 104:1783a,1786a
 TITLE: The physiologically active hydroxymethylcanthinone
 from *Ailanthus altissima*
 Kaken Pharmaceutical Co., Ltd., Japan
 Jpn. Kokai Tokkyo Koho, 2 pp.
 CODEN: JKXXAF
 PATENT ASSIGNEE(S): Patent
 SOURCE: Japanese
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

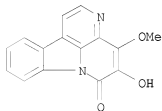
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60112791	A	19850619	JP 1983-220600	19831125
PRIORITY APPLN. INFO.: GI			JP 1983-220600	19831125



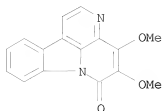
AB 5-(Hydroxymethyl)canthin-6-one (I) [89915-37-7], useful as an
 antitumor agent, vasodilator, phosphodiesterase inhibitor, and platelet
 agglutination inhibitor, was isolated from *A. altissima* root bark. Thus,
 10 kg dried *A. altissima* root barks was extracted with MeOH at 40-50°
 for 40 h. The extract was evaporated to dryness. The residue was extracted
 with CHCl₃ and worked up by column chromatog. on silica gel to yield 5 mg I.
 IT 89915-37-7P
 RL: PREP (Preparation)
 (manufacture of, from *Ailanthus altissima* root bark, as antitumor agent and
 vasodilator and phosphodiesterase inhibitor and platelet agglutination
 inhibitor)
 RN 89915-37-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(hydroxymethyl)- (CA INDEX
 NAME)



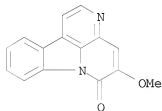
L4 ANSWER 71 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN
 ACCESSION NUMBER: 1985:606469 CAPLUS
 DOCUMENT NUMBER: 103:206469
 ORIGINAL REFERENCE NO.: 103:33153a,33156a
 TITLE: Effect of alkaloids of simaroubaceous plants on the local blood flow rate
 AUTHOR(S): Ohmoto, Taichi; Sung, Yeol Ik; Koike, Kazuo; Nikaido, Tamotsu
 CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Funabashi, 274, Japan
 SOURCE: Shoyakugaku Zasshi (1985), 39(1), 28-34
 CODEN: SHZAAY; ISSN: 0037-4377
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Some alkaloids showing inhibitory effect on phosphodiesterase [9025-82-5] were tested for their effect on the rate of blood flow in intestine and stomach of rabbit. Canthin-6-one [479-43-6] from *Picrasma quassioides* Bennet and β -carboline-1-propionic acid [89915-39-9] from *Ailanthus altissima* Swingle increased the rate of blood flow of intestine and stomach, whereas 4,5-dimethoxycanthin-6-one [18110-87-7], 5-hydroxy-4-methoxycanthin-6-one [18110-86-6] and 1-methoxycarbonyl- β -carboline [3464-66-2] from *P. quassioides* increased the rate of intestinal blood flow only.
 IT 18110-86-6 18110-87-7
 RL: BIOL (Biological study)
 (circulation response to and phosphodiesterase inhibition by)
 RN 18110-86-6 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



RN 18110-87-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)

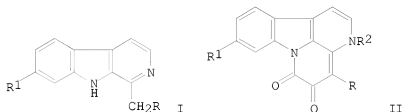


L4 ANSWER 72 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1985:502033 CAPLUS
 DOCUMENT NUMBER: 103:102033
 ORIGINAL REFERENCE NO.: 103:16289a,16292a
 TITLE: Canthin-6-one alkaloids from Brucea antidysenterica root bark
 AUTHOR(S): Harris, A.; Anderson, L. A.; Phillipson, J. D.; Brown, R. T.
 CORPORATE SOURCE: Sch. Pharm., Univ. London, London, WC1N 1AX, UK
 SOURCE: Planta Medica (1985), (2), 151-3
 CODEN: PLMEAA; ISSN: 0032-0943
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Three canthin-6-one alkaloids, canthin-6-one, 5-methoxycanthin-6-one, and the novel alkaloid 1-hydroxy-11-methoxycanthin-6-one were isolated from the root bark of B. antidysenterica.
 IT 15071-56-4
 RL: BIOL (Biological study)
 (from root bark of Brucea antidysenterica)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)

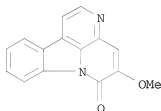


L4 ANSWER 73 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1985:488114 CAPLUS
 DOCUMENT NUMBER: 103:88114
 ORIGINAL REFERENCE NO.: 103:14164h,14165a
 TITLE: An unusually simple procedure for the synthesis of canthin-alkaloid derivatives using dialkyl oxalates as new regioselective N-alkylating agents
 AUTHOR(S): Matus, Ilona; Fischer, Janos
 CORPORATE SOURCE: Gedeon Richter Pharmaceutical Works, Budapest, H-1475, Hung.
 SOURCE: Tetrahedron Letters (1985), 26(3), 385-8
 CODEN: TELEAY; ISSN: 0040-4039
 DOCUMENT TYPE: Journal

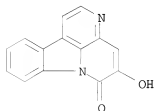
LANGUAGE: English
 OTHER SOURCE(S): CASREACT 103:88114
 GI



AB 1-Alkyl-β-carbolines I (R = H, Me, Et, R1 = H; R = H, R1 = MeO) were treated with R2O2CCO2R2 (R2 = PhCH2, Bu, Et) to give N-alkylated canthin-alkaloid derivs. II in 1 step.
 IT 15071-56-4
 RL: PRP (Properties)
 (NMR of)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)

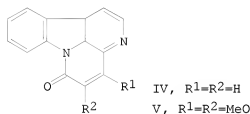
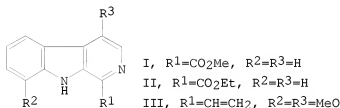


IT 64118-73-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and reaction with di-Me oxalate)
 RN 64118-73-6 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy- (CA INDEX NAME)

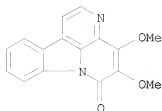


L4 ANSWER 74 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1985:191225 CAPLUS
 DOCUMENT NUMBER: 102:191225
 ORIGINAL REFERENCE NO.: 102:29933a,29936a
 TITLE: HPLC analysis of alkaloids in Ku Mu [Picroasma]

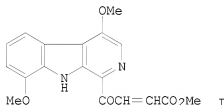
quassioides (D. Don. Benn.))
 AUTHOR(S): Luo, Wenyu; Zhang, Yuzhong
 CORPORATE SOURCE: Inst. Chin. Mater. Med., Acad. Tradit. Chin. Med.,
 Peop. Rep. China
 SOURCE: Yaowu Fenxi Zazhi (1985), 5(1), 11-14
 CODEN: YFZADL; ISSN: 0254-1793
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese
 GI



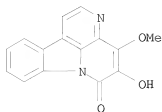
- AB 1-Carbomethoxy- β -carboline (I) [3464-66-2],
 1-carboethoxy- β -carboline (II) [72755-19-2],
 1-vinyl-4,8-dimethoxy- β -carboline (III) [65236-62-6], canthin-6-one
 (IV) [479-43-6] and 4,5-dimethoxy- β -canthin-6-one (V) [18110-87-7] in the stem of *P. quassioides* were determined by HPLC.
 Thus, .apprx.0.1-g powder was extracted with 25 mL MeOH, and the extract was
 subjected to anal. by HPLC with a column containing Nucleosil C18 as
 stationary phase [MeOH-NH₄OAc (60:0.1) as mobile phase]. The peak height
 was linearly related to concns. of 0.1-1.0 μ g. Reproducibility with a
 relative standard deviation of 1.75-3.24% was observed Alkaloid concns. in the
 stem were 0.067, 0.011, 0.008, 0.096 and 0.012%, resp.
- IT 18110-87-7
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of, in *Picrasma quassioides* stem, by HPLC)
- RN 18110-87-7 CAPLUS
- CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX
 NAME)



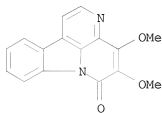
L4 ANSWER 75 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN
 ACCESSION NUMBER: 1985:59288 CAPLUS
 DOCUMENT NUMBER: 102:59288
 ORIGINAL REFERENCE NO.: 102:9257a,9260a
 TITLE: Studies on the constituents of *Picrasma quassioides* Bennet. III. The alkaloidal constituents
 AUTHOR(S): Ohmoto, Taichi; Koike, Kazuo
 CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Funabashi, 274, Japan
 SOURCE: Chemical & Pharmaceutical Bulletin (1984), 32(9), 3579-83
 CODEN: CPBTAL; ISSN: 0009-2363
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



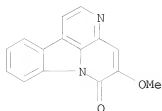
AB A new β -carboline alkaloid, named picrasidine E (I), was isolated from the wood of *P. quassioides* (Simaroubaceae), together with 7 known alkaloids, 1-methoxycarbonyl- β -carboline, 1-ethoxycarbonyl- β -carboline, 1-formyl- β -carboline, 1-hydroxymethyl- β -carboline, β -carboline-1-propionic acid, 4,5-dimethoxycanthin-6-one, and 5-hydroxy-4-methoxycanthin-6-one.
 IT 18110-86-6 18110-87-7
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (of *Picrasma quassioides*)
 RN 18110-86-6 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



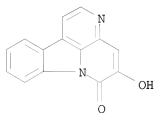
RN 18110-87-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



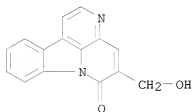
L4 ANSWER 76 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1984:507351 CAPLUS
 DOCUMENT NUMBER: 101:107351
 ORIGINAL REFERENCE NO.: 101:16341a,16344a
 TITLE: Inhibitors of cyclic AMP phosphodiesterase in medicinal plants. V. Inhibitors of cyclic AMP phosphodiesterase in *Picrasma quassioides* Bennet, and inhibitory activities of related β -carboline alkaloids
 AUTHOR(S): Sung, Yeol Ik; Koike, Kazuo; Nikaido, Tamotsu; Ohmoto, Taichi; Sankawa, Ushio
 CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Funabashi, 274, Japan
 SOURCE: Chemical & Pharmaceutical Bulletin (1984), 32(5), 1872-7
 CODEN: CPBTAL; ISSN: 0009-2363
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The cAMP phosphodiesterase inhibitors present in *P. quassioides* were identified as 1-methoxycarbonyl- β -carboline, 4,5-dimethoxycanthin-6-one, and 5-hydroxy-4-methoxycanthin-6-one. The structure-inhibitory activity relationships were studied in 31 derivs. of β -carboline, 2 dimeric derivs. of β -carboline, and 12 derivs. of canthin-6-one. β -Carboline derivs. with a methoxycarbonyl group and canthin-6-one derivs. with a methoxy group generally had a strong inhibitory effect in cAMP phosphodiesterase.
 IT 15071-56-4 64118-73-6 89915-37-7
 RL: BIOL (Biological study)
 (cyclic AMP phosphodiesterase inhibition by, structure in relation to)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



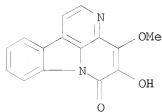
RN 64118-73-6 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy- (CA INDEX NAME)



RN 89915-37-7 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(hydroxymethyl)- (CA INDEX NAME)

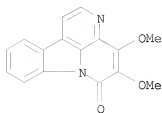


IT 18110-86-6 18110-87-7
RL: BIOL (Biological study)
(from *Picrasma quassioides*, cyclic AMP phosphodiesterase inhibition by)
RN 18110-86-6 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



RN 18110-87-7 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)

NAME)



L4 ANSWER 77 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN

ACCESSION NUMBER: 1984:188753 CAPLUS

DOCUMENT NUMBER: 100:188753

ORIGINAL REFERENCE NO.: 100:28647a,28650a

TITLE: Studies on the constituents of *Ailanthus altissima* Swingle. III. The alkaloidal constituents

Ohmoto, Taichi; Koike, Kazuo

CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Funabashi, 274, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1984), 32(1), 170-3

CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

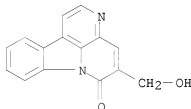
AB Two new alkaloids, 1-(2-hydroxy-1-methoxy)ethyl-4-methoxy- β -carboline and 5-hydroxymethylcanthin-6-one, were isolated from the root bark of *A. altissima* (Simaroubaceae), together with 3 known alkaloids, β -carboline-1-propionic acid, 1-carbamoyl- β -carboline, and 1-carbomethoxy- β -carboline. The structures were elucidated on the basis of spectral and chemical evidence.

IT 89915-37-7

RL: BIOL (Biological study)
(from root bark of *Ailanthus altissima*)

RN 89915-37-7 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(hydroxymethyl)- (CA INDEX NAME)

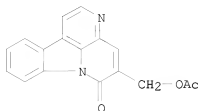


IT 89915-38-8P

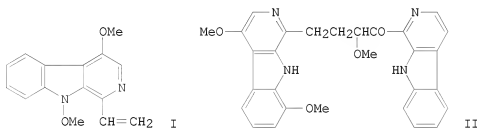
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 89915-38-8 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-[(acetyloxy)methyl]- (CA INDEX NAME)



L4 ANSWER 78 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN
 ACCESSION NUMBER: 1984:20433 CAPLUS
 DOCUMENT NUMBER: 100:20433
 ORIGINAL REFERENCE NO.: 100:3179a,3182a
 TITLE: Studies on the constituents of *Picrasma quassioides* Bennet. II. On the alkaloidal constituents
 AUTHOR(S): Ohmoto, Taichi; Koike, Kazuo
 CORPORATE SOURCE: Sch. Pharm. Sci., Toho Univ., Funabashi, 274, Japan
 SOURCE: Chemical & Pharmaceutical Bulletin (1983), 31(9), 3198-204
 CODEN: CPBTAL; ISSN: 0009-2363
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI

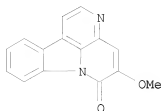


AB Two new alkaloids, 4,9-dimethoxy-1-vinyl- β -carboline (I) and β -carboline-1-yl 3-(4,8-dimethoxy- β -carboline-1-yl)-1-methoxypropyl ketone (II) were isolated from the wood of *P. quassioides* (Simaroubaceae), together with known alkaloids, 1-ethyl-4-methoxy- β -carboline, 4-methoxy-1-vinyl- β -carboline, 4,8-dimethoxy-1-vinyl- β -carboline, canthin-6-one, and 5-methoxycanthin-6-one. The structures of these alkaloids were elucidated on the basis of spectroscopic evidence.

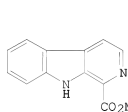
IT 15071-56-4
 RL: BIOL (Biological study)
 (from *Picrasma quassioides*)

RN 15071-56-4 CAPLUS

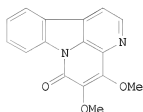
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



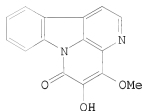
L4 ANSWER 79 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN
 ACCESSION NUMBER: 1983:536824 CAPLUS
 DOCUMENT NUMBER: 99:136824
 ORIGINAL REFERENCE NO.: 99:20989a,20992a
 TITLE: Composition analysis of alkaloids in Ku Mu (*Picrasma quassioides* D. Don. Benn.)
 AUTHOR(S): Luo, Shurong; Mai, Lu
 CORPORATE SOURCE: Inst. Mater. Med., Chin. Acad. Med. Sci., Beijing, Peop. Rep. China
 SOURCE: Yaowu Fenxi Zazhi (1983), 3(2), 90-4
 CODEN: YFZADL; ISSN: 0254-1793
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese
 GI



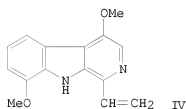
I



II



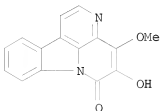
III



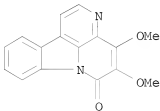
IV

AB Four alkaloid compds., 1-carbomethoxy- β -carboline (I), methylnigakinone (II; 4,5-dimethoxycanthin-6-one), nigakinone (III; 4-methoxy-5-hydroxycanthin-6-one), and 1-vinyl-4,8-dimethoxy- β -carboline (IV), were found in MeOH and CHCl₃ exts. from the root, stem (both inner and outer stem), twigs, bark, and powdered whole plant of *P. quassioides*. These 4 alkaloids were separated by TLC on silica gel G, developed with CHCl₃, and detected using a CS-910 dual wavelength scanner; the corresponding R_f values of I, II, III, and IV on the thin-layer plate were 0.45, 0.38, 0.25, and 0.16, resp. The contents of these alkaloids in *P. quassioides* showed marked geog. variations.

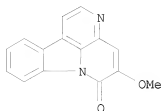
IT 18110-86-6 18110-87-7
 RL: BIOL (Biological study)
 (from *Picrasma quassioides*)
 RN 18110-86-6 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



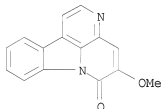
RN 18110-87-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



L4 ANSWER 80 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1983:536143 CAPLUS
 DOCUMENT NUMBER: 99:136143
 ORIGINAL REFERENCE NO.: 99:20877a,20880a
 TITLE: UV-mediated genotoxicity of furanoquinoline and of certain tryptophan-derived alkaloids
 AUTHOR(S): Towers, G. H. N.; Abramowski, Z.
 CORPORATE SOURCE: Dep. Bot., Univ. British Columbia, Vancouver, BC, V6T 2B1, Can.
 SOURCE: Journal of Natural Products (1983), 46(4), 572-7
 CODEN: JNPRDF; ISSN: 0163-3864
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The phototoxicity of various plant-derived furanoquinolines and tryptophan alkaloids was examined in bacteria and fungi and compared with that of 8-MOP. Photogenotoxicity tests of the compds. were also performed in CHO cells. The UV-mediated genotoxicity of the alkaloids was considerably lower than that of 8-MOP. The alkaloids were photosensitizers in addition to being phototoxic in microorganisms, and were phototoxic in CHO cells, inhibiting mitosis and causing chromosomal aberrations.
 IT 15071-56-4
 RL: PRP (Properties)
 (phototoxicity of, in CHO cells and microorganisms)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



L4 ANSWER 81 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1983:467586 CAPLUS
 DOCUMENT NUMBER: 99:67586
 ORIGINAL REFERENCE NO.: 99:10465a,10468a
 TITLE: Production of cytotoxic canthin-6-one alkaloids by Ailanthus altissima plant cell cultures
 AUTHOR(S): Anderson, Linda A.; Harris, Ann; Phillipson, J. David
 CORPORATE SOURCE: Sch. Pharm., Univ. London, London, WC1N 1AX, UK
 SOURCE: Journal of Natural Products (1983), 46(3), 374-8
 CODEN: JNPRDF; ISSN: 0163-3864
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A. altissima Was established as callus and cell suspension cultures. Canthin-6-one and 1-methoxycanthin-6-one were isolated by a combination of preparative TLC and preparative high-performance liquid chromatog. The 2 alkaloids were identified by their UV, mass, and 1H-NMR spectra. The combined yield of the 2 alkaloids was 1.38% of dry weight from callus and 1.27% of dry weight from cell suspensions. The cytotoxicities of canthin-6-one, 1-methoxycanthin-6-one, 5-methoxycanthin-6-one, and canthin-6-one-3-N-oxide to guinea pig ear keratinocytes were compared, and the IC50 values ranged from 1.11 to 5.76 µg/mL. There is no significant difference in activity among these 4 cytotoxic alkaloids.
 IT 15071-56-4
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (cytotoxicity of)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



L4 ANSWER 82 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1983:204263 CAPLUS
 DOCUMENT NUMBER: 98:204263
 ORIGINAL REFERENCE NO.: 98:30957a,30960a
 TITLE: Antimycotic substances in the crude drugs. II
 AUTHOR(S): Ohmoto, Taichi; Sung, Yeol Ik
 CORPORATE SOURCE: Fac. Pharm. Sci., Toho Univ., Funabashi, Japan
 SOURCE: Shoyakugaku Zasshi (1982), 36(4), 307-14

CODEN: SHZAA; ISSN: 0037-4377

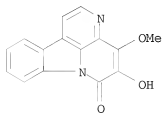
DOCUMENT TYPE:

Journal

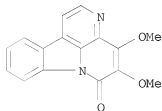
LANGUAGE:

English

- AB β -asarone [5273-86-9] Was isolated from *Acorus calamus angustatus*, methyleugenol [93-15-2] from *Asiasarum sieboldii*, d-phyllodulcin [21499-23-0] and hydrangenol [480-47-7] from *Hydrangea serrata thunbergii*, canthin-6-one (I) [479-43-6] from *Ailanthus altissima*, and Me β -carbolone-1-carboxylate [3464-66-2], 1-hydroxymethyl- β -carbolone [17337-22-3], 4,5-dimethoxycanthin-6-one [18110-87-7], and 5-hydroxy-4-methoxycanthin-6-one [18110-86-6] from *Picrasma quassioides*. I was the most potent antimycotic substance since it inhibited the growth of toxigenic fungi at low concns. (5-80 μ g/mL). There was no significant difference between the antifungal activity of β - and α -asarone [2883-98-9]. Methyleugenol completely inhibited the toxin production by *Aspergillus versicolor* and 3 other *Aspergillus* strains at 100 and 200 μ g/mL, resp. In general, the activity of these antimycotic substances depended on their concentration and on the fungus strain.
- IT 18110-86-6 18110-87-7
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(of medicinal plants, fungicidal activity of)
- RN 18110-86-6 CAPLUS
- CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)

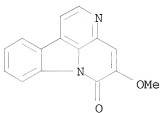


- RN 18110-87-7 CAPLUS
- CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)

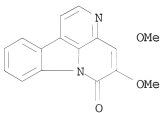


- L4 ANSWER 83 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
- ACCESSION NUMBER: 1983:50370 CAPLUS
- DOCUMENT NUMBER: 98:50370
- ORIGINAL REFERENCE NO.: 98:7715a,7718a
- TITLE: Indole alkaloids of *Odyendea gabonensis*
- AUTHOR(S): Forgacs, P.; Provost, J.; Touche, A.
- CORPORATE SOURCE: Cent. Rech. Lab. Roger Bellon, Alfortville, 94140, Fr.

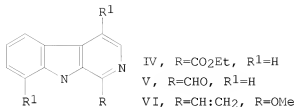
SOURCE: Planta Medica (1982), 46(3), 187-9
 CODEN: PLMEAA; ISSN: 0032-0943
 DOCUMENT TYPE: Journal
 LANGUAGE: French
 AB From the trunk bark of *O. gabonensis*, 6 indole alkaloids were isolated. These include canthin-6-one, 5-methoxycanthin-6-one, 4,5-dimethoxycanthin-6-one, 8-hydroxycanthin-6-one, 1-hydroxymethyl- β -carboline, and 1-carboxamide- β -carboline. This is the first report of these products from this plant.
 IT 15071-56-4 18110-87-7
 RL: BIOL (Biological study)
 (of *Odyendea gabonensis*)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



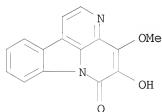
RN 18110-87-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



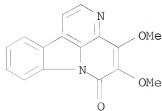
L4 ANSWER 84 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1980:72679 CAPLUS
 DOCUMENT NUMBER: 92:72679
 ORIGINAL REFERENCE NO.: 92:11937a,11940a
 TITLE: Chemical study of the alkaloids of Ku-Mu [*Picrasma quassioides* (D. Don) Benn.]
 AUTHOR(S): Yang, Jun-Shan; Luo, Shu-Rong; Shen, Xiu-Lan; Li, Yuan-Xiang
 CORPORATE SOURCE: Inst. Mater. Med., Chinese Acad. Med. Sci., Peking, Peop. Rep. China
 SOURCE: Yaoxue Xuebao (1979), 14(3), 167-77
 CODEN: YHHPAL; ISSN: 0513-4870
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese
 GI



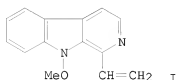
- AB Silica gel and alumina column and preparative thin-layer chromatog. of the alc. extract of heartwood of the medicinal plant *P. quassioides* yielded 7 alkaloids. Four of these were the known compds. 1-carbomethoxy- β -carboline (I), 4,5-dimethoxycanthin-6-one (II), canthin-6-one, and 4-methoxy-5-hydroxycanthin-6-one (III), and 3 were new alkaloids named kumujian A (IV; 1-carboethoxy- β -carboline), kumujian C (V: 1-formyl- β -carboline), and kumujian G (VI; 1-vinyl-4,8-dimethoxy- β -carboline). In vitro screening tests showed I, II, III, and VI to have inhibitory activity against *Staphylococcus aureus* strains.
- IT 18110-86-6 18110-87-7
 RL: BIOL (Biological study)
 (of *Picrasma quassioides* heartwood)
- RN 18110-86-6 CAPLUS
- CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



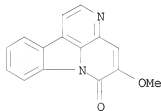
- RN 18110-87-7 CAPLUS
- CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



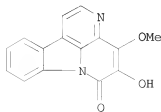
TITLE: New constituents of *Picrasma excelsa*. I
 AUTHOR(S): Wagner, Hildebert; Nestler, Thomas; Neszmelyi, Andreas
 CORPORATE SOURCE: Inst. Pharm. Arzneimittellehre, Univ. Muenchen,
 Munich, D-8000/2, Fed. Rep. Ger.
 SOURCE: Planta Medica (1979), 36(2), 113-18
 CODEN: PLMEAA; ISSN: 0032-0943
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 GI



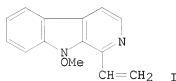
AB Canthin-6-one, 5-methoxy-canthin-6-one, 4-methoxy-5-hydroxy-
 canthin-6-one, scopoletin, and a new β -carboline alkaloid,
 N-methoxy-1-vinyl- β -carboline (I), m.p. .apprx.150°, were
 isolated from wood of *P. excelsa*. UV, IR, $^1\text{H-NMR}$, $^{13}\text{C-NMR}$, and mass
 spectral data for I are given.
 IT 15071-56-4 18110-86-6
 RL: BIOL (Biological study)
 (from *Picrasma excelsa* wood)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



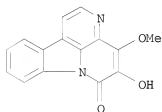
RN 18110-86-6 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA
 INDEX NAME)



L4 ANSWER 86 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1979:104182 CAPLUS
 DOCUMENT NUMBER: 90:104182
 ORIGINAL REFERENCE NO.: 90:16467a,16470a
 TITLE: N-methoxy-1-vinyl- β -carboline, a new alkaloid
 from *Picrasma excelsa* (Swartz)
 AUTHOR(S): Wagner, Hildebert; Nestler, Thomas; Neszmelyi, Andreas
 CORPORATE SOURCE: Inst. Pharm. Arzneimittellehre, Univ. Muenchen,
 Munich, Fed. Rep. Ger.
 SOURCE: Tetrahedron Letters (1978), (31), 2777-8
 CODEN: TELEAY; ISSN: 0040-4039
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 GI

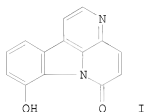


AB The carboline I, canthin-6-one, and 5-hydroxy-4-methoxycanthin-6-one were
 isolated from *P. excelsa*. The structure of I was determined spectroscopically.
 IT 18110-86-6P
 RL: PREP (Preparation)
 (from *Picrasma excelsa*)
 RN 18110-86-6 CAPLUS
 CN 6H-indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA
 INDEX NAME)



L4 ANSWER 87 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1978:439395 CAPLUS
 DOCUMENT NUMBER: 89:39395
 ORIGINAL REFERENCE NO.: 89:6071a,6074a
 TITLE: Alkaloid constituents of *Ailanthus excelsa*
 (*Simaroubaceae*)
 AUTHOR(S): Cordell, Geoffrey A.; Ogura, Masaru; Farnsworth,
 Norman R.
 CORPORATE SOURCE: Coll. Pharm., Univ. Illinois Med. Cent., Chicago, IL,
 USA
 SOURCE: Lloydia (1978), 41(2), 166-8
 CODEN: LLOYA2; ISSN: 0024-5461

DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI

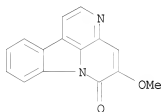


AB From the root bark of *A. excelsa* (Simaroubaceae) 4 alkaloids were obtained. Three of these, canthin-6-one, 1-methoxycanthin-6-one, and 5-methoxycanthin-6-one are known. The fourth alkaloid is new and from anal. of spectral data it was deduced to be 8-hydroxycanthin-6-one (I).

IT 15071-56-4
 RL: BIOL (Biological study)
 (of *Ailanthus excelsa* root bark)

RN 15071-56-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



L4 ANSWER 88 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1978:110436 CAPLUS

DOCUMENT NUMBER: 88:110436

ORIGINAL REFERENCE NO.: 88:17259a,17262a

TITLE: Correlation between phylogeny, chemical constituents and pharmaceutical aspects of plants and their applications in drug research

CORPORATE SOURCE: Chinese Academy of Medical Sciences, Lab. Med. Plants, Inst. Materia Med., Peop. Rep. China

SOURCE: Zhiwu Xuebao (1977), 19(4), 257-62
 CODEN: CHWHAY; ISSN: 0577-7496

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB Pharmacol. properties, chemical constituents and phylogeny of *Picrasma quassioides*, *Zanthoxylum elephantiasis*, *Berberis poiretii*, *Stephania* and 33 *Rhododendron* species were investigated. *P. quassioides* contains antibacterial nigakinone [18110-86-6] and methyl-nigakinone [18110-87-7], and *Z. elephantiasis* contained antibacterial canthin-6-one [479-43-6]. *B. poiretii* roots contained coptisine [3486-66-6], an antimicrobial agent previously found in *Coptis* roots. Cepharanthine [481-49-2] isolated from *Stephania* showed leukocyte-increasing activity. Farrerol [24211-30-1], astragalol

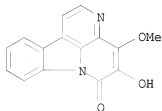
[480-10-4], kaempferol [520-18-3], and scopoletin [92-61-5] from Rhododendron had expectorant activity, and hyperin [482-36-0] and quercetin [117-39-5] from Rhododendron are antitussives.

IT 18110-86-6 18110-87-7

RL: BIOL (Biological study)
(of *Picrasma quassioides*, pharmacol. of)

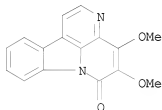
RN 18110-86-6 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



RN 18110-87-7 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



L4 ANSWER 89 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1977:514580 CAPLUS

DOCUMENT NUMBER: 87:114580

ORIGINAL REFERENCE NO.: 87:18185a,18188a

TITLE: 5-Hydroxycanthin-6-one from Simarouba amara

AUTHOR(S): Lassak, Erich V.; Polonsky, Judith; Jacquemin, Henri

CORPORATE SOURCE: Inst. Chim. Subst. Nat., Gif-sur-Yvette, Fr.

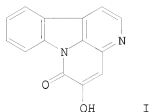
SOURCE: Phytochemistry (Elsevier) (1977), 16(7), 1126-7

CODEN: PYTCAS; ISSN: 0031-9422

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



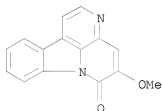
AB The alkaloid 5-hydroxycanthin-6-one (I) was isolated from *S. amara* root bark and the compound was identified by derivative preparation and comparison with an authentic methoxy derivative Phys. properties are given.

IT 15071-56-4

RL: BIOL (Biological study)
(5-Methoxycanthin-6-one)

RN 15071-56-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)

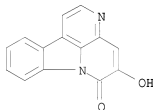


IT 64118-73-6

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
BIOL (Biological study); OCCU (Occurrence)
(of *Simarouba amara*)

RN 64118-73-6 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy- (CA INDEX NAME)



L4 ANSWER 90 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1975:171268 CAPLUS

DOCUMENT NUMBER: 82:171268

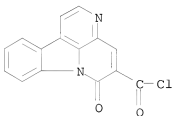
ORIGINAL REFERENCE NO.: 82:27393a,27396a

TITLE: Antimicrobial agents from higher plants. Synthesis in the canthin-6-one

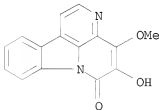
(6H-indolo[3,2,1-de][1,5]naphthyridin-6-one) series

AUTHOR(S): Mitscher, Lester A.; Shipchandler, Mohammed;

CORPORATE SOURCE: Showalter, H. D. Hollis; Bathala, Mohinder S.
 Div. Nat. Prod. Chem., Ohio State Univ., Columbus, OH,
 USA
 SOURCE: Heterocycles (1975), 3(1), 7-14
 CODEN: HTCYAM; ISSN: 0385-5414
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI For diagram(s), see printed CA Issue.
 AB Canthin-6-one (I; R = R1 = H) was prepared in 15% yield from pyridoindole II
 (R2 = MeOCH2) by successive hydrolysis and oxidation with MnO2 to II (R2 =
 CHO), which was condensed with CH2(CO2H)2. Condensation of II (R = CHO)
 with CH2(CO2Me)2 followed by acid hydrolysis gave I (R = CO2H, R1 = H)
 which was decarboxylated by heating at 80° with Cu powder in anhydrous
 pyridine to give I (R = R1 = H) in 19% overall yield. Amides I [R =
 CONH2, CONEt2, CONHCHMe2, piperidinocarbonyl, CONHC6H3(OMe)2-2,4, R1 = H]
 were prepared from I (R = COCl, R1 = H). Treating II (R2 = CH2OMe) with
 BuLi and MeO2CCO2Me followed by methylation using CH2N2 gave I (R = R1 =
 MeO).
 IT 55854-63-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (amidation of)
 RN 55854-63-2 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-5-carbonyl chloride, 6-oxo- (CA
 INDEX NAME)

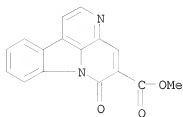


IT 18110-86-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (methylation of)
 RN 18110-86-6 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA
 INDEX NAME)



IT 55854-61-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and hydrolysis of)
 RN 55854-61-0 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-5-carboxylic acid, 6-oxo-, methyl

ester (CA INDEX NAME)

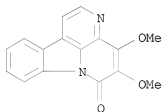


IT 18110-87-7P 55854-62-1P 55854-64-3P
 55854-65-4P 55854-66-5P 55854-67-6P
 55854-68-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

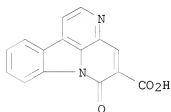
RN 18110-87-7 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



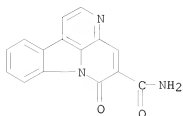
RN 55854-62-1 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-5-carboxylic acid, 6-oxo- (CA INDEX NAME)

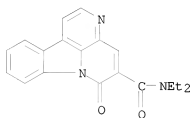


RN 55854-64-3 CAPLUS

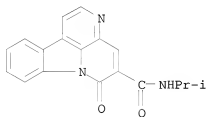
CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-5-carboxamide, 6-oxo- (CA INDEX NAME)



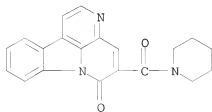
RN 55854-65-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-5-carboxamide, N,N-diethyl-6-oxo-
 (CA INDEX NAME)



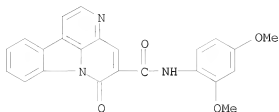
RN 55854-66-5 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-5-carboxamide,
 N-(1-methylethyl)-6-oxo- (CA INDEX NAME)



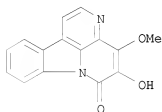
RN 55854-67-6 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-6-one, 5-(1-piperidinylcarbonyl)-
 (CA INDEX NAME)



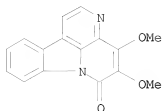
RN 55854-68-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridine-5-carboxamide,
 N-(2,4-dimethoxyphenyl)-6-oxo- (CA INDEX NAME)



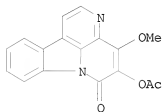
L4 ANSWER 91 OF 102 CAPLUS COPYRIGHT 2009 ACS on SIN
 ACCESSION NUMBER: 1973:418922 CAPLUS
 DOCUMENT NUMBER: 79:18922
 ORIGINAL REFERENCE NO.: 79:3047a,3050a
 TITLE: Structure of a new β -carboline alkaloid from *Picrasma ailanthoides*
 AUTHOR(S): Kondo, Yoshikazu; Takemoto, Tsunematsu
 CORPORATE SOURCE: Pharm. Inst., Tohoku Univ., Sendai, Japan
 SOURCE: Chemical & Pharmaceutical Bulletin (1973), 21(4), 837-9
 CODEN: CPBTAL; ISSN: 0009-2363
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI For diagram(s), see printed CA Issue.
 AB A new alkaloid, 1-hydroxymethyl- β -carboline (I) has been isolated from the stems of *Picrasma ailanthoides* (Simaroubaceae) along with methyl β -carboline-1-carboxylate. Structure of I was established by phys. and chemical means.
 IT 18110-86-6P 18110-87-7P
 RL: PREP (Preparation)
 (from *Picrasma ailanthoides*)
 RN 18110-86-6 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



RN 18110-87-7 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



IT 18211-86-4P 42337-53-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 18211-86-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(acetyloxy)-4-methoxy- (CA
 INDEX NAME)

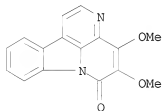


RN 42337-53-1 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy-, compd. with
 2,4,6-trinitrophenol (1:1) (CA INDEX NAME)

CM 1

CRN 18110-87-7

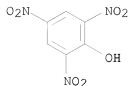
CMF C16 H12 N2 O3



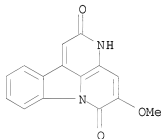
CM 2

CRN 88-89-1

CMF C6 H3 N3 O7

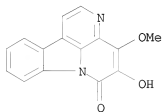


L4 ANSWER 92 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1972:140585 CAPLUS
 DOCUMENT NUMBER: 76:140585
 ORIGINAL REFERENCE NO.: 76:22820h,22821a
 TITLE: Indacanthinone, a crystalline chemical component from the wood of *Samadera indica*
 AUTHOR(S): Iyer, V. Subramoni; Rangaswami, S.
 CORPORATE SOURCE: Dep. Chem., Univ. Delhi, Delhi, India
 SOURCE: Current Science (1972), 41(4), 140-1
 CODEN: CUSCAM; ISSN: 0011-3891
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI For diagram(s), see printed CA Issue.
 AB The structure of indacanthinone (I), was determined by chemical, and NMR and uv spectral data. I with POCl₃ gave a mono-Cl derivative by replacement of the enol OH group; with Br in CHCl₃ I gave a mono-Br derivative
 IT 35817-57-3P
 RL: PREP (Preparation)
 (from *Samadera indica*)
 RN 35817-57-3 CAPLUS
 CN 3H-Indolo[3,2,1-de][1,5]naphthyridine-2,6-dione, 5-methoxy- (CA INDEX NAME)

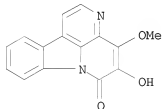


L4 ANSWER 93 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1968:87441 CAPLUS
 DOCUMENT NUMBER: 68:87441
 ORIGINAL REFERENCE NO.: 68:16879a,16882a
 TITLE: Standardization of crude drugs. XIX. Constituents of *Picrasma ailanthoides*. 1. The structure of nigakinone
 AUTHOR(S): Kimura, Yushiro; Takido, Michio; Koizumi, Seitaro
 CORPORATE SOURCE: Nihon Univ., Tokyo, Japan
 SOURCE: Yakugaku Zasshi (1967), 87(11), 1371-3
 CODEN: YKKZAJ; ISSN: 0031-6903
 DOCUMENT TYPE: Journal
 LANGUAGE: Japanese

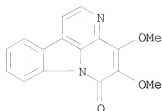
- GI For diagram(s), see printed CA Issue.
- AB Yellow heartwood (2 kg.) of *P.ailanthoides* is extracted with 8 vols. warm MeOH, the extract concentrated in vacuo, filtered, and from the filtrate are obtained 3.3 g. nigakinone (I) and small amount of 4,5-dimethoxycanthin-6-one (II), m. 145-6°. I is subjected to liquid chromatog. using CaHPO₄·2H₂O as an adsorbent and CHCl₃ and C₆H₆ as developers followed by recrystn. from MeOH to give purified I, m. 224-5° (MeOH), monoacetate m. 193-5°, monobenzoate m. 223-4°, Me ether m. 146-7° (identical with II). Heating of 100 mg. I with 20 ml. 48% HBr at 160-80° for 5 hrs. gives nor-nigakinone, m. >300°, di-Me ether m. 146-7°, dibenzoate m. 253°. Oxidation of 100 mg. I with KMnO₄ in Me₂CO at room temperature for 18 hrs. gives 30 mg. Me β-carboline-1-carboxylate (III), m. 168-8.5°. Thus, the structure for I was established.
- IT 18110-86-6, Nigakinone
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkaloid from *Picrasma ailanthoides*)
- RN 18110-86-6 CAPLUS
- CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



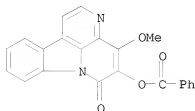
- IT 18110-86-6P 18110-87-7P 18110-88-8P
18110-89-9P 18110-90-2P 18211-86-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
- RN 18110-86-6 CAPLUS
- CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-methoxy- (CA INDEX NAME)



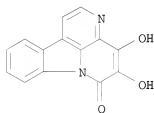
- RN 18110-87-7 CAPLUS
- CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



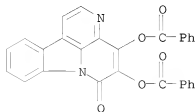
RN 18110-88-8 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(benzoyloxy)-4-methoxy- (CA INDEX NAME)



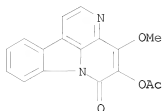
RN 18110-89-9 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dihydroxy- (CA INDEX NAME)



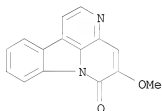
RN 18110-90-2 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-bis(benzoyloxy)- (CA INDEX NAME)



RN 18211-86-4 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(acetyloxy)-4-methoxy- (CA INDEX NAME)

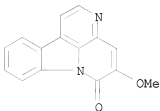


L4 ANSWER 94 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1968:886 CAPLUS
 DOCUMENT NUMBER: 68:886
 ORIGINAL REFERENCE NO.: 68:147a,150a
 TITLE: Alkaloids of *Zanthoxylum caribaeum*
 AUTHOR(S): Della Casa, Deanna; Sojo C., Maria
 CORPORATE SOURCE: Univ. Central Venezuela, Caracas, Venez.
 SOURCE: Journal of the Chemical Society [Section] C: Organic
 (1967), (21), 2155-6
 CODEN: JSOOAX; ISSN: 0022-4952
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB 5-Methoxycanthin-6-one and N-methylisocorydine were isolated from the bark
 of *Z. caribaeum*.
 IT 15071-56-4
 RL: BIOL (Biological study)
 (from *Zanthoxylum caribaeum*)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



L4 ANSWER 95 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1967:73247 CAPLUS
 DOCUMENT NUMBER: 66:73247
 ORIGINAL REFERENCE NO.: 66:13715a,13718a
 TITLE: Isolation and identification of three alkaloids from
 the bark of *Zanthoxylum elephantiasis*
 AUTHOR(S): Awad, Albert T.; Beal, Jack L.; Talapatra, Sunil K.;
 Cava, Michael P.
 CORPORATE SOURCE: Ohio State Univ., Columbus, OH, USA
 SOURCE: Journal of Pharmaceutical Sciences (1967), 56(2),
 279-81
 CODEN: JPMSAE; ISSN: 0022-3549
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The bark of *Z. elephantiasis* contained 3 major alkaloids which were
 identified as 6-canthinone, 5-methoxy-6-canthinone, and laurifoline.

IT 15071-56-4
 RL: BIOL (Biological study)
 (in *Zanthoxylum elephantiasis*)
 RN 15071-56-4 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)



L4 ANSWER 96 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1966:75936 CAPLUS

DOCUMENT NUMBER: 64:75936

ORIGINAL REFERENCE NO.: 64:14234b-h,14235a-c

TITLE: Synthesis of tubofiavine, 4-ethylcanthin-6-one, and canthin-6-one

AUTHOR(S): Rosenkranz, Juergen Hans; Botyos, Georgene; Schmid, Hans

CORPORATE SOURCE: Univ. Zurich, Switz.

SOURCE: Justus Liebigs Annalen der Chemie (1966), 691, 159-64

CODEN: JLACBF; ISSN: 0075-4617

DOCUMENT TYPE: Journal

LANGUAGE: German

OTHER SOURCE(S): CASREACT 64:75936

GI For diagram(s), see printed CA Issue.

AB [RCan values are relative to canthin-6-one (I)]. (±)-Tryptophan (5.3 g.) dissolved in 50 cc. 2N K₂CO₃ by heating, the solution cooled to 25°, 3 g. (±)-ethylsuccinic anhydride added dropwise during 15 min. with stirring, after 15 min. the mixture adjusted to pH 1 with HCl and extracted with Et₂O, the extract washed with 2N HCl and H₂O, dried, and evaporated

(all evapns. made in a rotary evaporator at 40°/12 mm.), the residual oil kept several days at -4°, and cold Et₂O added gave 590 mg. II, m. 181-3° (MeOH-Et₂O); the mother liquor evaporated and the residue dried in vacuo gave 4.48 g. noncryst. product, consisting chiefly of IIa. To a mixture of 20 g. polyphosphoric acid (PPA), 6 g. finely powdered V₂O₅, and 3 cc. POCl₃ was added 500 mg. II at 115° with stirring, after 45 min. the mixture decomposed with ice H₂O, treated with concentrated

NH₃ with cooling, and extracted with CHCl₃. The extract was evaporated, the residue in

4:1 C₆H₆-Me₂CO filtered off on a small column of silica gel, and the eluate evaporated to give 95 mg. III, m. 176° (MeOH), identical (mixed m.p. and ir spectrum) with authentic III; in addition to III, a small amount of its 4,5-dihydro derivative (IV), RCan 1.55, was also formed. III (47.1 mg.) in 5 cc. EtOH hydrogenated over 50 mg. 10% Pd-C at 22° and 704 mm. (after 22 hrs., after absorption of 44.2 cc. H₂, absorption ceased) gave IV, m. 74° (Et₂O-hexane). IV (230 mg.) in 25 cc. 4N HCl stirred 45 min. at 45° with 1 g. Zn dust, the solids filtered off and washed with H₂O until no light blue fluorescence was observed in the washings, the combined filtrate and washings concentrated and treated with excess NaHCO₃, and the product isolated with CHCl₃ and chromatographed on silica gel with

9:1 C6H6-Me2CO gave after distillation at 150-60° (air bath)/0.01 mm. 133 mg. V, m. 72-3° (Et2O-hexane). V was also obtainable by direct reduction of III with Zn and HCl. V (120 mg.) in 5 cc. PhMe refluxed 1 hr. with 250 mg. SeO2, 50 mg. SeO2 added, the mixture refluxed 1 hr. more, the supernatant solution decanted from residue, the latter washed with Me2CO, and the combined organic solns. filtered through 5 g. neutral Al2O3 and evaporated gave 71 mg. III, m. 176° (MeOH). Strongly enriched, powdered IIa (4.4 g.) added to a mixture of 160 g. PPA, 50 g. finely powdered V2O5, and 20 g. POC13 at 115° with stirring and after 45 min. the mixture worked up like II gave 353 g. crude product, which hydrogenated in EtOH over 350 mg. 10% Pd-C .apprx.14 hrs. gave after chromatography on silica gel with 9:1 C6H6-Me2CO first 73 mg. VI, then 102 mg. mixed fractions, and finally 73 mg. VII, m. 105-7° (Et2O-hexane), RCan 1.25. VII (44 mg.) reduced with Zn and HCl like IV gave after chromatography and distillation at 160-70° (air bath)/0.01 mm. 24 mg. 5-ethyl-4,5-dihydrocanthine (VIII), oil, RCan 0.92; VIII.HCl showed a strong pale blue fluorescence in solution VIII (20 mg.) dehydrogenated (3 hrs.) with 200 mg. SeO2 in 5 cc. PhMe like III, after work-up the solution filtered through 5 g. neutral Al2O3, the column washed with Me2CO and eluted with MeOH, the eluate filtered through a small column of Dowex 50W-X2 (H+ form), the column washed with MeOH and H2O and eluted with concentrated HCl, the eluate

evaporated,

the residue treated with aqueous NaHCO3, and the product isolated with CHCl3 and sublimed at 160-70°/0.01 mm. gave tuboflavine (IX), m.

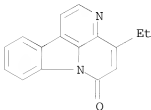
216° (transition at 208°) (Me2CO-hexane), identical (mixed m.p., ir and uv spectra, and thin layer chromatographic behavior) with natural IX (Kump, et al., CA 59, 10146d), which was assigned the structure shown and not that of IXa on the basis of its N.M.R. spectrum. To a hot (110) suspension of 4.7 g. (±)-tryptophan in 150 cc. dry C5H5N was added during 15 min. 2 g. succinic anhydride with stirring, after 1.5 hrs. the resulting solution evaporated, the residue dissolved in 200 cc. H2O, the solution adjusted to pH 1 with concentrated HCl and extracted (Soxhlet) with Et2O, and

the extract concentrated and let stand at -4° for a long time to give 4.28 g. (±)-X, hygroscopic needles, m. 163-4° (Me2CO-Et2O). To a hot (115°) mixture of 60 g. PPA, 18 g. finely powdered V2O5, and 6 cc. POC13 was added 1.38 g. X with stirring, after 45 min. the mixture worked up like III, the crude product in 6:1 C6H6-Me2CO filtered through silica gel, and the eluate evaporated gave 175 mg. mixture (thin layer chromatography) of I, RCan 1.0, and XI, RCan 0.66, in a ratio of .apprx.4:1; 3 recrystns. from MeOH, followed by sublimation at 150°/0.01 mm., gave pure I, m. 161-1.5° identical (mixed m.p., ir and uv spectra, and thin layer chromatographic behavior) with natural I. Pertinent ir, uv, and N.M.R. data were given.

IT 5171-49-3P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-ethyl-
RL: PREP (Preparation)
(preparation of)

RN 5171-49-3 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-ethyl- (CA INDEX NAME)



L4 ANSWER 97 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1966:29194 CAPLUS

DOCUMENT NUMBER: 64:29194

ORIGINAL REFERENCE NO.: 64:5446d-e

TITLE: Hawaiian plant studies. XIII. Isolation of a
 canthinone from a member of the family *Amaranthaceae*
 Scheuer, Paul J.; Pattabhiraman, Tammanur R.
 AUTHOR(S): Univ. of Hawaii, Honolulu
 CORPORATE SOURCE: Lloydia (1965), 28(2), 95-100
 SOURCE: CODEN: LLOYA2; ISSN: 0024-5461

DOCUMENT TYPE: Journal

LANGUAGE: English

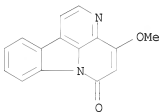
AB cf. CA 59, 14039h; 62, 14418g. 4-Methoxy-6-canthinone was isolated from
 stem and root bark of *Charpentiera obovata*. It had uv maximum at 288, 297.5,
 350, and 366 mμ, and m. at 220-1°. It was also synthesized.

Similar compds. have been found only in *Rutaceae* and *Simaroubaceae*.

IT 5023-08-5, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-methoxy-
 (from *Charpentiera obovata*)

RN 5023-08-5 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-methoxy- (CA INDEX NAME)



L4 ANSWER 98 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1962:73445 CAPLUS

DOCUMENT NUMBER: 56:73445

ORIGINAL REFERENCE NO.: 56:14249b-d

TITLE: 4,5-Dimethoxycanthin-6-one and
 2,6-dimethoxy-p-benzoquinone from *Picrasma*
ailanthoides

AUTHOR(S): Inamoto, Naoki; Masuda, Shozo; Shimamura, Osamu;
 Tsuyuki, Takahiko

CORPORATE SOURCE: Univ. Tokyo

SOURCE: Bulletin of the Chemical Society of Japan (1961), 34,
 888-9

CODEN: BCSJA8; ISSN: 0009-2673

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A MeOH extract of the wood was diluted with H₂O, filtered to remove tar,
 extracted

with C₆H₆, and the C₆H₆ evaporated to give a residue which was chromatographed
 on Al₂O₃ in C₆H₆ to give 4,5-dimethoxycanthin-6-one (I), m.

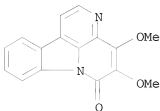
147.3-7.5° (MeOH), approx. 0.01% of dried material. Oxidation of I
 with KMnO₄ in Me₂CO at 20° gave Me β-carboline-1-carboxylate,
 m. 164-5°. A hot aqueous extract of the wood was treated with Pb(OAc)₂
 and then C; the C was extracted with CHCl₃, the solvent evaporated, and the
 residue crystallized from MeOH to give 0.005% 2,6-dimethoxy-p-benzoquinone.

IT 18110-87-7, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one,

4,5-dimethoxy-
(from *Picrasma ailanthoides*)

RN 18110-87-7 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dimethoxy- (CA INDEX NAME)



L4 ANSWER 99 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1961:38150 CAPLUS

DOCUMENT NUMBER: 55:38150

ORIGINAL REFERENCE NO.: 55:7458h-i,7459a-i,7460a-f

TITLE: The alkaloids of *Hunteria eburnea*. I. The structures

of eburnamine, isoburnamine, eburnamenine, and eburnamonine, and a synthesis of dl-eburnamonine

Bartlett, M. F.; Taylor, W. I.

AUTHOR(S): C I B A Pharm. Prods., Inc., Summit, NJ

CORPORATE SOURCE: Journal of the American Chemical Society (1960), 82, 5941-6

SOURCE: CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

OTHER SOURCE(S): CASREACT 55:38150

GI For diagram(s), see printed CA Issue.

AB Eburnamine (I) and isoburnamine (II) were interconvertible diastereoisomeric carbinolamines that had the structures III (equatorial OH) and III (axial OH), resp., and that gave upon oxidation the N-acylindole, eburnamonine (IV). Eburnamenine (V) was produced from I and II by a mild acid-catalyzed dehydration. The reduction of IV yielded I and II as well as the dihydro derivative (VI) of V. The Se dehydrogenation of IV yielded 4-ethyl-4-propyl-4,5-dihydrocathin-6-one (VII) and 4-ethyl- (VIII) and 4-propylcathin-6-one (IX). A general method was developed for the synthesis of VIII and IX. The Wolf-Kischner reduction of I yielded d-1,2,3,4,6,7,12,12b-octahydroindolo[2,3-a]quinolizine (X). A simple efficient 7-step synthesis of IV was described. The attempted formation of the picrates of I or II in EtOH gave the picrate of O-ethyleburnamine (XI), m. 152-66° with bubbling, resolidified and rem. 186°; the picrate gave the free XI, m. 147-8° (EtOH), [α]_D 64° (all rotations were measured in CHCl₃ at 25 ± 2°). XI with MeI gave XI.MeI, m. 262° (decomposition). I or II (100 mg.) heated 0.5 hr. on the steam bath in 2 cc. AcOH, and the free base treated with picric acid gave the picrate of V, m. 186 or 196° (EtOH, depending on the conditions of crystallization); V.MeI m. 274° (decomposition) (H₂O). I or II with MeI gave only V.MeI. I or II refluxed several hrs. with picric acid and EtOH gave nearly 100% picrate of V, m. 186 or 196°. Picrate of XI heated in vacuo at 160° until the bubbling ceased and resolidification was complete gave the picrate of V, m. 186°. V (870 mg.) in EtOH hydrogenated over 500 mg. prerduced PtO₂, filtered, and treated with 0.9 g. picric acid gave 1.17 g. picrate of VI, m. 210-13°, which with base yielded VI, m. 89-91°

(aqueous MeOH), $[\alpha]_D -1.5 \pm 1^\circ$, $pK'a$ 6.9. I (2.77 g.) in 35 cc. C5H5N added slowly with cooling to 2.8 g. CrO3 in 35 cc. C5H5N, kept 10 min., filtered through Al2O3 with CH2Cl2, and evaporated gave 2.76 g. IV, m. 173-4° (EtOH). II (140 mg.) gave similarly 90 mg. IV, m. 175-6°. IV (490 mg.) in 50 cc. Et2O reduced with 50 mg. LiAlH4, and the product chromatographed on Al2O3 gave successively VI, II, and I. I (775 mg.), 500 mg. KOH, 5 cc. N2H4.H2O, and 15 cc. (CH2OH)2 heated 2 hrs. at 130°, and then during 2 hrs. to 260°, cooled, and extracted with Et2O yielded 830 mg. X, m. 106° (hexane), $[\alpha]_D$ 93°. X (135 mg.) and 100 mg. Pd black heated 3 days in an evacuated sealed tube with 200 mg. maleic acid in H2O, basified, and extracted with CH2Cl2 yielded 35 mg. crude anhydronium compound, which reduced with NaBH4 in MeOH gave dl-X, m. 132°, $[\alpha]_D$ 0.6 \pm 2°. IV (1.23 g.) and 5.0 g. Se heated 12 hrs. in an evacuated tube at 340-50°, powdered, and extracted with CH2Cl2-MeOH, and the residue (1.09 g.) from the extract chromatographed on Al2O3 yielded 340 mg. VII [picrate, m. 199-200° (EtOH); in one run obtained as a dihydrate, m. 162° and 203°], 25 mg. oil, 193 mg. IX, m. 128-9° (sublimed), and 125 mg. VIII, m. 170-2° (hexane). The picrate of VII, decomposed on Al2O3, gave oily VII, $[\alpha]_D$ 36° $pK'a$ 3.0. VII (115 mg.) and 220 mg. 5% NaH dispersion in mineral oil refluxed 6 hrs. in PhMe, treated with an addnl. 150 mg. NaH dispersion, refluxed 16 hrs., and worked up, and the crude product chromatographed on Al2O3 gave 24 mg. l-isomer of 1-(1-ethylbutyl)- β -carboline (XII), m. 142-3°, $[\alpha]_D$ -7°. V (430 mg.) and 1 mole equivalent OsO4 in 5 cc. C5H5N kept 16 hrs. at room temperature and evaporated to dryness, and the residue in

H2O

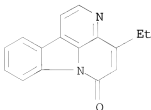
treated with excess SO2 and extracted with Et2O gave 400 mg. amorphous eburnamenine glycol (XIII), m. 100-20°. XIII (100 mg.) treated 20 min. with 100 mg. CrO3 in C5H5N gave hydroxyeburnamenone (XIV), m. 192-4° (EtOH). XIV was readily hydrolyzed to an amino acid which was recycled by hot dilute acids or CH2-N2-Et2O. VII (320 mg.) reduced with 320 mg. LiAlH4 in 30 cc. Et2O, and the product chromatographed on Al2O3 gave 4-ethyl-4-propylcanthine, m. 103-4° (hexane). IV (1.18 g.) in 80 cc. MeOH and 12 cc. 5N NaOH refluxed 24 hrs., diluted with H2O, washed with CH2Cl2, adjusted with AcOH to pH 5-6, and extracted with CH2Cl2 yielded 1.15 g. eburnamoninic acid (XV), m. 253° (in vacuo). XV (43 mg.) in 4 cc. 1:1 MeOH-CH2Cl2 with excess CH2N2-Et2O gave 29 mg. Me ester (XVI) of XV, m. 138-9° (hexane). XV in MeOH with CH2N2-Et2O gave only IV. The reduction of XV or XVI with LiAlH4 gave a mixture of I and II. Tryptamine (XVII) and 600 mg. Et2C(CHO)(CH2)2CO2H heated 1 hr. at 120° at atmospheric pressure and 1 hr. in vacuo and triturated with Et2O yielded 1,1-diethyl-4-oxo-1,2,3,4,6,7,12 β ,12b-octahydroindolo[2,3-a]quinolizine (XVIII), m. 291° (in vacuo). XVIII reduced with LiAlH4 yielded dl-X, m. 132°. EtPrChCOCl (0.92 g.) and 1 g. XVII in C5H5N heated 10 min. on the steam bath, concentrated, and worked up, the crude amide (1.3 g.), m. 120°, refluxed 3 hrs. in POCl3, and the resulting crude dihydro- β -carboline (750 mg.) dehydrogenated with Se at 360° during 20 min. in a sealed tube gave 550 mg. XII, m. 144-5° (Et2O-hexane). BuLi added with stirring under N to 1.17 g. harman in 200 cc. dry Et2O, the mixture treated after 5 hrs. with 940 mg. (CO2Et)2 in 10 cc. dry Et2O, stirred overnight, treated with 20 cc. H2O, and filtered, and the residual Li salt (600 mg.) triturated with aqueous AcOH gave 5-hydroxycanthin-6-one (XIX), m. 258-9° (decomposition) (CH2Cl2-EtOH). XIX in CH2Cl2 containing excess CH2N2 kept overnight yielded 100% 5-methoxycanthin-6-one, 238°. In the same manner as described for the preparation of XII, 2 g. butyl- β -carboline, m. 171-2°, gave 1.43 g. 5-hydroxy-4-propylcanthine-6-one (XX), which with Ac2O gave the acetate (XXI), m. 201-2°. XXI (230 mg.) in 25 cc. refluxing AcOH treated periodically with Zn dust, and the product (175 mg.) heated 40

min. in vacuo with Se gave IX, m. 132-3° (Et₂O). Propyl-β-carboline (2 g.) yielded similarly 800 mg. 5-hydroxy-4-ethylcanthin-6-one, m. 230-1° (CH₂Cl₂-EtOH), which refluxed with Ac₂O yielded the acetate (XXII), m. 211-12° (Ac₂O). XXII (100 mg.) in AcOH reduced with Zn dust, and the crude product (90 mg.) heated 20 min. in vacuo at 360° with Se gave 20 mg. VIII, m. 179-80° (sublimed in vacuo). 1-Isobutyl-β-carboline (655 mg.), m. 200°, was converted in the usual manner to 300 mg. 4-iso-Pr analog of XX and its acetate, m. 196-7°, which reduced and dehydrogenated in the usual manner yielded 10 mg. 4-iso-Pr analog of IX, m. 118° (C₆H₆-hexane). NaOH (200 g.) in 250 cc. H₂O added dropwise during 1.5 hrs. with stirring to 113 g. p-EtC₆H₄OH in 162 cc. CHCl₃ at 60°, cooled, filtered, concentrated, and steam distilled gave 7.2 g. 4-dichloromethyl-4-ethylcyclohexadienone (XXIII), m. 61-2°. XXIII hydrogenated over Pd-C gave 4-dichloromethyl-4-ethylcyclohexanone (XXIV), m. 58° (hexane). XXIV (7 g.) in 25 cc. concentrated HNO₃ refluxed 10 min. gave 3 g. HO₂CCH₂CH₂EtCH(CHCl₂)CH₂CO₂H (XXV), m. 125°. XXV (500 mg.) and 10 cc. H₂O heated 3 hrs. at 210° in a sealed tube gave 450 mg. HO₂CCH₂CH₂EtCH(CHO)CH₂CO₂H (XXVI), m. 102-3° (Et₂O-CH₂Cl₂). XXVI (126 mg.) and 100 mg. XVII in 0.5 cc. AcOH heated 12 hrs. at 100°, evaporated, heated 15 min. at 100° in 5 cc. polyphosphoric acid, and diluted with H₂O gave 57 mg. dl-eburnamonine lactam (XXVII), m. 215°. XVII (35 mg.) and 150 mg. LiAlH₄ in 20 cc. Et₂O refluxed 1 hr. and worked up, and the crude product (30 mg.) treated 5 min. with 30 mg. CrO₃ in 5 cc. C₅H₅N and chromatographed from CH₂Cl₂ on Al₂O₃ yielded 20 mg. dl-IV, m. 203-4° (EtOH).

IT 5171-49-3P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-ethyl-15071-56-4P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- 64118-73-6P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy- 109513-68-0P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-ethyl-5-hydroxy-, acetate 109597-65-1P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-propyl- 109597-66-2P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-isopropyl- 109602-72-4P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-propyl- 109602-73-5P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-isopropyl- 109818-15-7P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-isopropyl-, acetate 109818-17-9P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-propyl-, acetate 856784-38-8P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-ethyl-5-hydroxy-RL: PREP (Preparation)
(preparation of)

RN 5171-49-3 CAPLUS

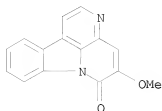
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-ethyl- (CA INDEX NAME)



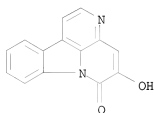
RN 15071-56-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)

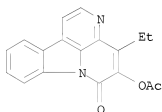
10/535,430



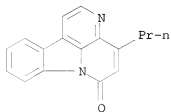
RN 64118-73-6 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy- (CA INDEX NAME)



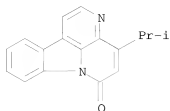
RN 109513-68-0 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(acetyloxy)-4-ethyl- (CA INDEX NAME)



RN 109597-65-1 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-propyl- (CA INDEX NAME)

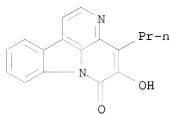


RN 109597-66-2 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-(1-methylethyl)- (CA INDEX NAME)



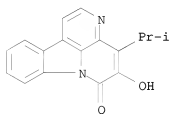
RN 109602-72-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-propyl- (CA INDEX NAME)



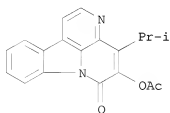
RN 109602-73-5 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy-4-(1-methylethyl)- (CA INDEX NAME)



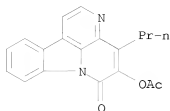
RN 109818-15-7 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(acetyloxy)-4-(1-methylethyl)- (CA INDEX NAME)

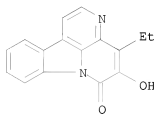


RN 109818-17-9 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(acetyloxy)-4-propyl- (CA INDEX NAME)

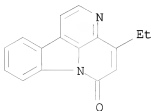


RN 856784-38-8 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-ethyl-5-hydroxy- (CA INDEX NAME)

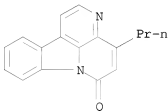


L4 ANSWER 100 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1960:86571 CAPLUS
 DOCUMENT NUMBER: 54:86571
 ORIGINAL REFERENCE NO.: 54:16473d-h
 TITLE: Constitution of four alkaloids from the bark of
 Hunteria eburnea; eburnamine, isoeburnamine,
 eburnamenine, and eburnamonine
 AUTHOR(S): Bartlett, M. Frederick; Taylor, William I.;
 Raymond-Hamet
 SOURCE: Compt. rend. (1959), 249, 1259-60
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 GI For diagram(s), see printed CA Issue.
 AB The alkaloids separated chromatographically were: eburnamenine (I),
 [α]_D²⁵ 183° (CHCl₃) (picrate m. 196°); eburnamonine
 (II), 13a-ethyl-2,3,5,6,12,13,13a,13b-octahydro-1H-indolo [3,2,1-de]pyrido
 [3,2,1-ij] [1,5]naphthyridin-12-one), m. 183°, [α]_D²⁶
 89° (CHCl₃); eburnamine (III), m. 181°, [α]_D²⁶
 -93° (CHCl₃) (hydrate m. 105-10°); isoeburnamine (IV), m.
 217-20°, [α]_D²⁶ 111° (CHCl₃). III and IV are
 stereoisomeric alcs., 13a-ethyl-2,3,5,6,12,13,13a,13b-octahydro-1H-
 indolo[3,2,1-de]pyrido[3,2,1-ij][1,5]naphthyridin-12-ol. III and IV gave
 I by acid dehydration and gave II by CrO₃ oxidation LiAlH₄ reduction of II gave
 III and IV and dihydroeburnamine. II heated with SeO₂ yielded V and the
 dealkylation products, 4-ethyl- and
 4-propyl-6-indolo[3,2,1-de][1,5]naphthyridin-6-one. Under Wolff-Kishner
 conditions, III gave 1,1-diethyl-1,2,3,4,6,7,12,12b-octahydroindolo[2,3-
 a]quinolizine, m. 106°, [α]_D²⁰ 92°, converted by
 dehydrogenation and hydrogenation to the racemate, m. 132°,
 identical with a synthetic sample. Ultraviolet spectra were in agreement
 with the assigned structures.
 IT 5171-49-3P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-ethyl-
 109597-65-1P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one,

4-propyl-
 RL: PREP (Preparation)
 (preparation of)
 RN 5171-49-3 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-ethyl- (CA INDEX NAME)



RN 109597-65-1 CAPLUS
 CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-propyl- (CA INDEX NAME)



L4 ANSWER 101 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1953:58679 CAPLUS
 DOCUMENT NUMBER: 47:58679
 ORIGINAL REFERENCE NO.: 47:9983d-i,9984a-d
 TITLE: Alkaloids of the Australian Rutaceae: Pentaceras australis. III. Identification of 4-Methylthiocanthin-6-one
 AUTHOR(S): Nelson, Eva R.; Price, J. R.
 CORPORATE SOURCE: Commonwealth Sci. & Ind. Research Organization, Melbourne
 SOURCE: Australian Journal of Scientific Research, Series B: Biological Sciences (1952), A5, 768-81
 CODEN: AJSBAM; ISSN: 0365-365X
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 GI For diagram(s), see printed CA Issue.
 AB cf. C.A. 47, 6956e. The 3rd alkaloid, C15H10O3N2 (I), in the bark of P. australis is shown to be 4-(methylthio)canthin-6-one. I was synthesized and its low basicity is discussed in relation to the basicity of 4-methoxycanthin-6-one. Refluxing 5 g. I with 25 g. KOH in 250 ml. EtOH yields 3 g. 4-hydroxycanthin-6-one (II), C14H8O2N2, m. 288-90°, giving a yellow Na salt from 10% NaOH solution. Refluxing II with Ac2O and pyridine 15 min. gives 4-acetoxycanthin-6-one (III), C16H10O3N2, m. 205.5-6.5° (from CHCl3-petr. ether). II with KMnO4 in aqueous alkaline solution gives β-carboline-1-carboxylic acid (IV). Refluxing 1 g. I with 7 g. KOH in 70 ml. AmOH 8 hrs. in a stream of N gives II and MeSH. Refluxing only 15 min., diluting the mixture with ether, extracting with ice water,

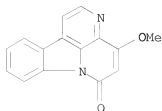
and acidifying yields cis- β -methylthio- β -(β -carbolin-1-yl)acrylic acid [β -methylthio-9H-pyrid[3,4-b]-indole-1-acrylic acid], C15H12O2S2N2, m. 240° or 251-2° depending on the rate of heating. Me ester (V), benzene-petr. ether, 181-2°. II was synthesized from the acid chloride of IV by shaking, then refluxing, with the Mg-ethoxy derivative of malonic ester (prepared according to Walker and Hauser, C.A. 40, 5712.7), acidifying with AcOH, refluxing the pale green precipitate 4 hrs. with 7.5 ml. each of concentrated HCl and EtOH, dissolving

the yellow precipitate in dilute NaOH, and precipitating II with AcOH. Keeping III 3 days in dioxane with CH2N2 ppts. a red compound, C15H12O3N2 (VI), m. about 240° (decomposition), and the solution yields 4-methoxycanthin-6-one (VII), C15H10O2N2, m. 220-20.5° (from C6H6) [picrate, C15H10O2N2.C6H3O7N3, m. 221.5-2.5° (from EtOH); methiodide, C16H13O2N2I.H2O, m. 218° (decomposition) (from water)]. Refluxing VII 3 hrs. with an equal volume of 46% HBr and AcOH gives II. Boiling 250 mg. VII 7 min. with 20 ml. 10% KOH in AmOH yields an acid, which with HCl-MeOH gives the Me ester of β -amoxy- β -(β -carbolin-1-yl)-acrylic acid, C20H22O3N2, m. 145-6°. Boiling I 24 hrs. in Me2CO with KMnO4 leaves most of it unchanged and gives only very little IV. I with Zn dust and HCl yields MeSH and dihydrocanthine hydrate. If I is refluxed 3 hrs. in C6H6 with fresh Raney Ni 4,5-dihydrocanthine-6-one (VIII) seps., but with aged Ra Ni canthine-6-one is formed. Refluxing I 4 hrs. with Ra-Ni in MeOH yields the Me ester, in EtOH the Et ester, of β -(β -carbolin-1-yl)propionic acid (IX) seps. I let stand in AcOH with H2O2 9 days at room temperature gives the sulfone N-oxide, C15H10O4S2N2, cream-colored, m. 201° (from CHCl3) orange, m. 205° (from AcOH), which resists reduction by SO2, but gives VIII on boiling with Zn in AcOH. Heating I 2 hrs. on a water bath with Chloramine-T in AcOH gives 5-chloro-4-(methylthio)canthine-6-one, C15H9-OSN2Cl, m. 252-3°. Refluxing II 3 hrs. with POC13 yields 4-chlorocanthine-6-one (X), C14H7ON2Cl, m. 201-2°. After heating II with PC15 and POC13 3 hrs. at 130-140°, pouring the cooled mixture into ice water, and extracting it which is extracted with CHCl3, the aqueous solution contains 4-hydroxy-5-chlorocanthine-6-one, decompose up to 360°, forming an Ac derivative, C16H9O3N2Cl, m. 225-6°; the CHCl3 contains 4,5-dichlorocanthine-6-one, C14H6ON2Cl2, m. 226-7°, which yields IX on refluxing 4 hrs. with Ra Ni in MeOH. I was obtained by heating X with MeSK in a sealed tube 7 hrs. at 75-80° and chromatographing the reaction mixture. The ultraviolet spectra of I, III, V, and VII are recorded. 18 references.

IT 5023-08-5, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-methoxy-106941-27-9, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-hydroxy-(and derivs.)

RN 5023-08-5 CAPLUS

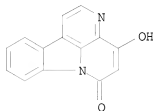
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-methoxy- (CA INDEX NAME)



10/535,430

RN 106941-27-9 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-hydroxy- (CA INDEX NAME)

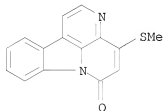


IT 500299-14-9P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-(methylthio)- 855612-12-3P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-(methylsulfonyl)-, 3-oxide 855612-13-4P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dichloro- 855612-14-5P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-chloro-4-(methylthio)- 855612-15-6P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-chloro-4-hydroxy-, acetate (ester) 855612-16-7P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-chloro-4-hydroxy- 855612-17-8P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-chloro-

RL: PREP (Preparation)
(preparation of)

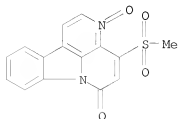
RN 500299-14-9 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-(methylthio)- (CA INDEX NAME)



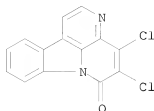
RN 855612-12-3 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-(methylsulfonyl)-, 3-oxide (CA INDEX NAME)

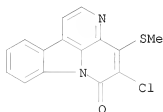


RN 855612-13-4 CAPLUS

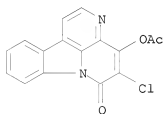
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4,5-dichloro- (CA INDEX NAME)



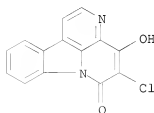
RN 855612-14-5 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-chloro-4-(methylthio)- (CA INDEX NAME)



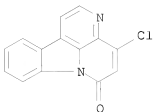
RN 855612-15-6 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-(acetyloxy)-5-chloro- (CA INDEX NAME)



RN 855612-16-7 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-chloro-4-hydroxy- (CA INDEX NAME)



RN 855612-17-8 CAPLUS
CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 4-chloro- (CA INDEX NAME)

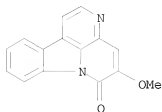


L4 ANSWER 102 OF 102 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1953:41309 CAPLUS
 DOCUMENT NUMBER: 47:41309
 ORIGINAL REFERENCE NO.: 47:6956e-i, 6957a-b
 TITLE: Alkaloids of the Australian Rutaceae: Pentaceras
 Australis Hook. F. II. Identification of
 5-methoxycanthinone
 AUTHOR(S): Haynes, H. F.; Nelson, Eva R.; Price, J. R.
 CORPORATE SOURCE: Commonwealth Sci. & Ind. Research Organization,
 Melbourne
 SOURCE: Australian Journal of Scientific Research, Series B:
 Biological Sciences (1952), A5, 563-9
 CODEN: AJSBAM; ISSN: 0365-365X
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 GI For diagram(s), see printed CA Issue.
 AB cf. C.A. 47, 3858f. The 2nd alkaloid, C15H10O2N2, of *P. australis* is
 shown to be 5-methoxycanthin-6-one (I). I contains 1 MeO, forms a HCl
 salt, m. 206-7°, picrate, C15H10O2N2.C6H3O7N3, m. 242-4°
 (from MeOH), and methiodide (II), C16H13O2N2I, prepared in CHCl3 and
 crystallized
 from water, m. 308-9°. Oxidation of I with KMnO4 in Me2CO at room
 temperature during 18 hrs. gives β -carboline-1-carboxylic acid, m.
 239.5° (decomposition). Boiling I with alc. KOH, followed by
 acidification, gives cis-2-methoxy-3-(1- β -carbolinyl)acrylic acid
 (III), C15H12O3N2.2H2O, m. 235° (decomposition), which was not
 isomerized to the trans form by heating in alkaline solution I is regenerated
 from III by treatment with HCl-MeOH, by boiling with AcOH 3 hrs., or by
 heating an aqueous solution to the Na salt of III. Refluxing I with 15% HBr in
 66% aqueous AcOH 24 hrs. gives 5-hydroxycanthinone (IV), C14H8O2N2, m.
 259-61°, gives a yellow-green color with FeCl3 and when refluxed
 with Ac2O 2 hrs., is converted to 5-acetoxycanthinone (V), C14H7ON2(OAc),
 m. 231.5-2°, from which I is regenerated after standing 5 days in
 dioxane with CH2N2 in moist ether. Refluxing IV with o-C6H4(NH2)2 in AcOH
 0.5 hr. yields a 2-hydroxyquinoxaline derivative, C20H14ON4, m. 343-5°
 (decomposition), to which the structure A is assigned. I is recovered
 unchanged after attempted hydrogenation in the presence of Raney Ni, but
 boiling in AcOH with granulated Zn 45 min. gives 4,5-dihydrocanthine
 and, if the reaction time is short, canthine. Heating with Raney
 alloy-NaOH on the water bath 3-5 hrs. converted I to
 β -carbonyl-propionic acid, and IV to
 2-hydroxy-3-(1- β -carbonyl)acrylic acid, C14H12O3N2.H2O, m.
 200-0.5° (decomposition); Me ester, benzene, C15H14O3N2, m.
 114-15° (from C6H6). Heating II in 10% aqueous NaOH gives C13H14ON2,
 m. 190-3° (decomposition), for which structure B is proposed. Attempted
 synthesis of IV failed. Ultraviolet spectra of I and IV are given. 5
 references.
 IT 15071-56-4, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy-
 (and derivs.)

10/535,430

RN 15071-56-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-methoxy- (CA INDEX NAME)

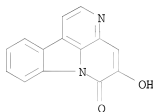


IT 64118-73-6P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one,
5-hydroxy- 99964-80-4P, 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-
one, 5-hydroxy-, acetate (ester)

RL: PREP (Preparation)
(preparation of)

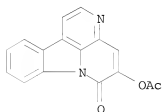
RN 64118-73-6 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-hydroxy- (CA INDEX NAME)



RN 99964-80-4 CAPLUS

CN 6H-Indolo[3,2,1-de][1,5]naphthyridin-6-one, 5-(acetyloxy)- (CA INDEX NAME)



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(FILE 'HOME' ENTERED AT 15:07:03 ON 06 APR 2009)

FILE 'REGISTRY' ENTERED AT 15:07:21 ON 06 APR 2009

L1 STRUCTURE UPLOADED

L2 7 S L1

L3 69 S L1 FULL

FILE 'CAPLUS' ENTERED AT 15:07:56 ON 06 APR 2009

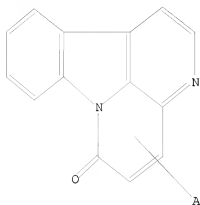
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L4 102 S L3
L5 14 S L3/THU

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L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

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